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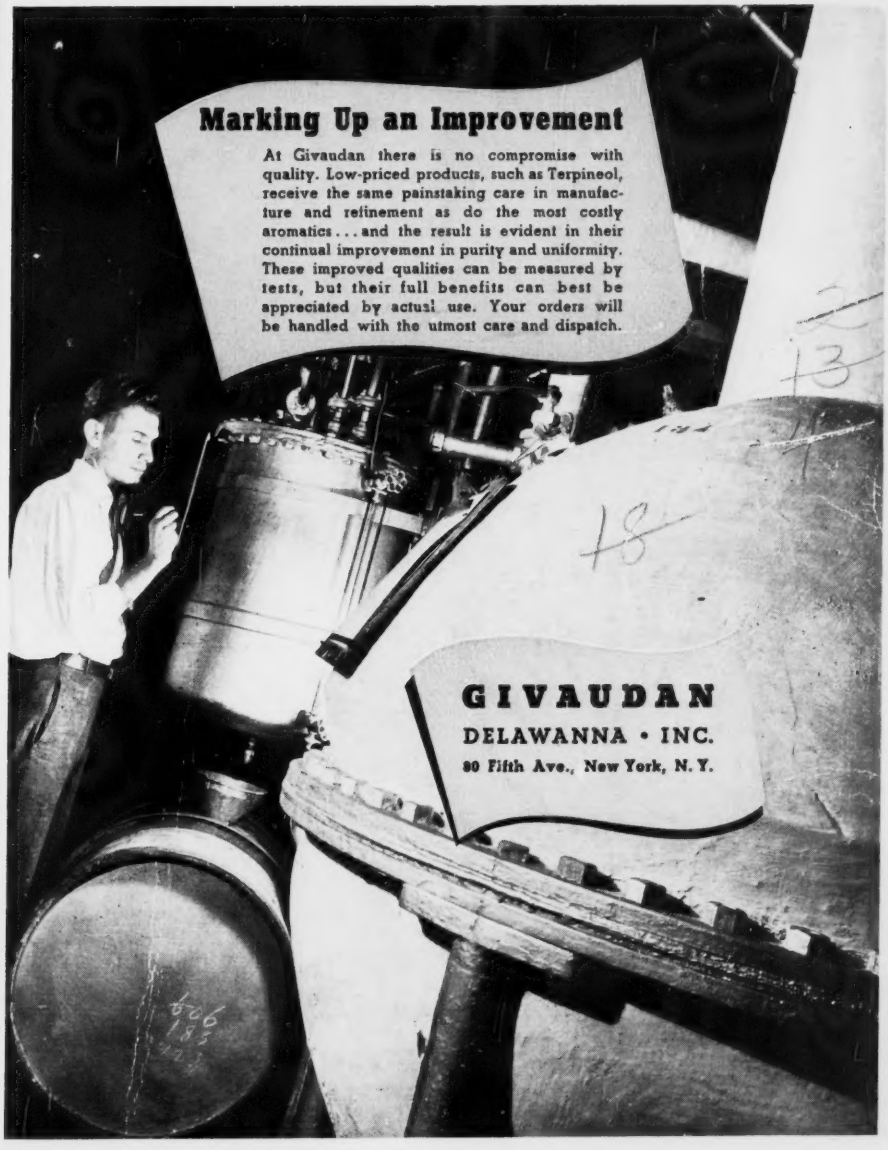
SOAP

DECEMBER 1937

Marking Up an Improvement

At Givaudan there is no compromise with quality. Low-priced products, such as Terpineol, receive the same painstaking care in manufacture and refinement as do the most costly aromatics . . . and the result is evident in their continual improvement in purity and uniformity. These improved qualities can be measured by tests, but their full benefits can best be appreciated by actual use. Your orders will be handled with the utmost care and dispatch.



GIVAUDAN
DELAWANNA • INC.
80 Fifth Ave., New York, N. Y.

SOAPS
INSECTICIDES
DISINFECTANTS
CHEMICAL SPECIALTIES
SANITARY SUPPLIES
POLISHES
CLEANERS

CAREFULLY PLANNED

The architect carefully plans his proposed building long before the ground is broken. Hours of minute detail assure structural perfection and beauty in the finished edifice.

So, too, with our aromatic chemicals, . . . before a product is produced commercially, days of laboratory detail and experimentation are devoted to perfecting the process and assuring the perfection and beauty of the finished product.

The production of our well known

RHODINOL COEUR

is a process, carefully planned and executed to produce uniform and unequalled excellence.

VAN AMERINGEN-HAEBLER, INC.

315 FOURTH AVENUE NEW YORK CITY

CHICAGO LOS ANGELES TORONTO SALT LAKE CITY
SAN FRANCISCO SEATTLE ATLANTA PORTLAND

FACTORY: ELIZABETH, N. J.

VAPACK *Locking* WALL BRACKET

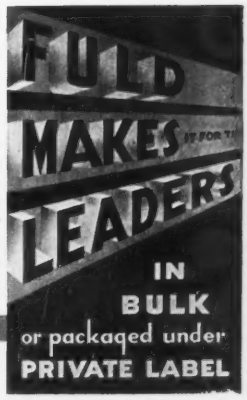
to be given free with

VITOZONE *Deodorant* BLOCKS

THE BRACKET THAT HOLDS THE BLOCK THAT HOLDS THE LEAD!

Always FRESH! CLEAN! —*and always* THERE!

The famous 24-oz. Vitozone deodorant block—long recognized for its finer and more lasting perfume—reaches a new peak of popularity in its patent-protected locking bracket. • Easy to refill with a fresh block in a fresh carton. • Write for details.



FULD BROS.

702-710 SOUTH WOLFE STREET

Manufacturers of Sanitary Chemicals Exclusively for the Jobber

BALTIMORE MARYLAND

Here's Real News

WITH inexpensive oils, fats and fatty acids in great demand, Industrial's large supplies of Liqro and Indusoil are welcome news to users of fats and oils. The Paper Industry is fast becoming an important source of raw materials for users of Fatty Acids, Abietic Acid and Pitch. Industrial Chemical Sales is a pioneer refiner of these products and from its plants at Covington, Va., and Charleston, S. C. can offer large quantities of the following:

LIQRO

A blend of crude pine fatty acids, with the following specifications:

Acid No.	150 to 160
Rosin Acids	10 to 50%
Fatty Acids	35 to 45%
Sterols	15 to 20%

This material is available in large quantities both from our Covington, Va. mill and our new mill at Charleston, S. C.
Indicated uses are for asphalt emulsions, cutting oils, low priced soaps, and many other applications where a low price fat is a requirement.
Present prices on contract F.O.B. Charleston, S. C.:

Tank Cars	$35.00 per ton
Carloads, in drums	$45.00 per ton

Large samples and specific data available on request.

INDUSOIL

A blend of refined fatty acids, with the following specifications:

AVERAGE QUALITY OF INDUSOIL

Specific Gravity 60°/60° F.	0.96—0.98
Pour Point	47° F.—52° F.
Viscosity (Saybolt)	
@ 100° F.	700—900 Sec.
@ 210° F.	70— 80 Sec.
Flash Point	350—380° F.
Fire Point	410—430° F.
Sediment	None
Moisture	Practically None
Ash	Practically None
Completely Soluble in Petroleum Ether	
Acid No.	150—170
Saponification Value	150—170
Color (Rosin Scale)	G—I
Fatty Acid	43—47%
Rosin Acids	38—42%
Sterols	13—17%

Excellent as a blend with red oil for textile soaps and can be used with red oil for most other applications required of red oil, including cutting oils, drawing compounds, soluble oils, pine scrubs, etc.

PITCH

A new type pine fatty acid pitch, available from the distillation of Liqro, resulting in a pitch of excellent color and with a melting point of 85° to 95° F.

ABIETIC ACID

A distilled product excellent in color and meeting the following requirements:

Acid No.	176—185
Saponification No.	176—185
Iodine No.	150—170
Color (Rosin Scale)	N (Opaque)
Melting Point	230° F to 250° F

Samples, Specific Data, and Additional Information Can Be Secured by Writing

INDUSTRIAL CHEMICAL SALES

DIVISION WEST VIRGINIA PULP AND PAPER COMPANY

230 Park Avenue, New York, N. Y. — 1002 Lincoln Ave., Tyrone, Pa. — 417 Schofield Bldg., Cleveland, Ohio — 205 W. Wacker Drive, Chicago, Ill.

SOAP

Volume XIII
Number 12

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December, 1937

MEMBER AUDIT BUREAU OF CIRCULATIONS

SANITARY Products Section, which is included as a department of every issue of SOAP, begins on page 75. Production Section begins on page 61.

Published monthly by

MAC NAIR-DORLAND COMPANY, INC.
254 WEST 31st STREET NEW YORK, N. Y.

Subscription rate, $3.00 per year. Foreign, including, Canadian. $4.00. Copy closing dates—22nd of month preceding month of issue for reading matter and 10th of month preceding month of issue for display advertising. Entered as second-class matter, April 11, 1931, at Post Office, New York, under act of March 3, 1879. Mail circulation, November, 1937, issue, 3,692 copies. Total distribution, 4,000.

REDUCE WHITE SOAP COSTS

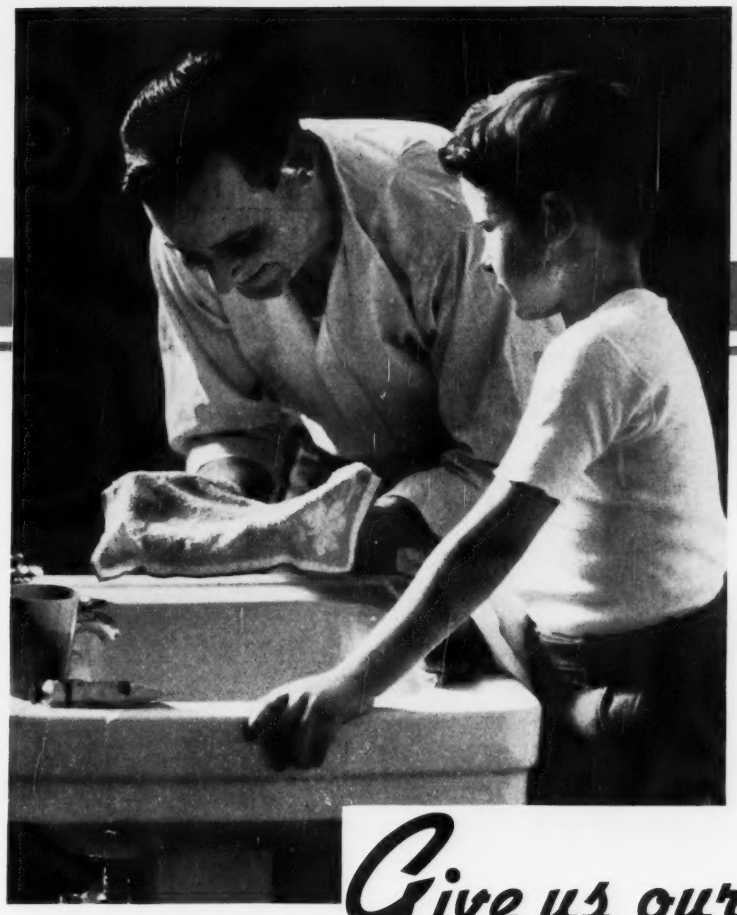
...and meet competition!

YES, you can actually make a better looking white soap at less cost if you use **HS.** You can use less fatty acids by increasing the silicate content, you can maintain the same sudsing power and you save as high as ½¢ a pound . . . by using **HS.**

In addition to its soap-saving action, **HS**—when mixed with Standard Silicate—will not only improve appearance and effect noticeable economies, but it will at last give you a white soap to sell at competitive price levels.

Our technical staff will gladly tell you how to meet competition with **HS.** *Write!*

STANDARD SILICATE DIVISION
Diamond Alkali Company
KOPPERS BUILDING • PITTSBURGH, PA.
Plants at CINCINNATI · JERSEY CITY · LOCKPORT, N. Y. · MARSEILLES, ILL.



Give us our skin care the Vitamin F way—in our soaps!

A man's skin needs just as much care as a woman's. But try and get a man to give his skin the care a woman does. It can't be done! Men will—and do use soap though, for the bath, for the face and hands, and for shaving. That is where skin vitamin F can get in its beneficial work on a man's skin. Vitamin F is the vitamin most closely associated with skin health, skin vitality and skin freshness. A deficiency of vitamin F shows up in the form of dry skin, rough, scaly skin, eruptions, and other skin disorders that even a man would rather avoid.

Only small quantities of vitamin F are needed to give a soap an effective vitamin F content. The cost therefore becomes negligible compared to the benefits derived from its inclusion. Vitamin F opens up a new field of sales possibilities for soaps.

Take advantage of these possibilities. Build a real "he man" skin health appeal for your soaps by including skin vitamin F in your formulas.

ARCHER-DANIELS-MIDLAND CO.

Specialties Division

675 Roanoke Building Minneapolis, Minnesota

ARCHER-DANIELS-MIDLAND COMPANY,
675 Roanoke Building, Minneapolis, Minnesota

Gentlemen:

Tell us more about the properties of skin-health vitamin F and its application to soaps. We are interested in knowing how little the addition of vitamin F to our product would cost.

MAIL TODAY !

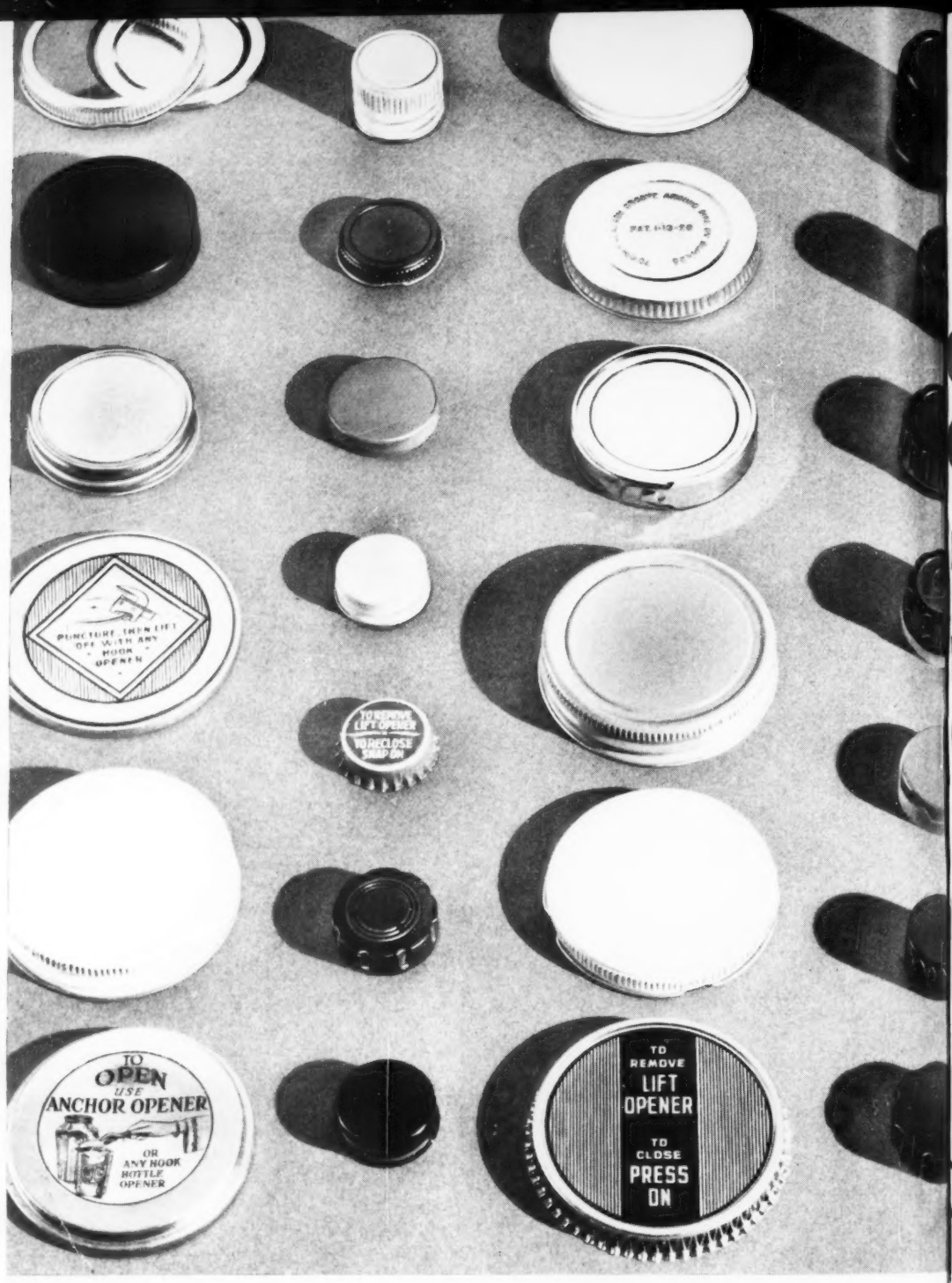
Individual .....

Firm .....

Address .....

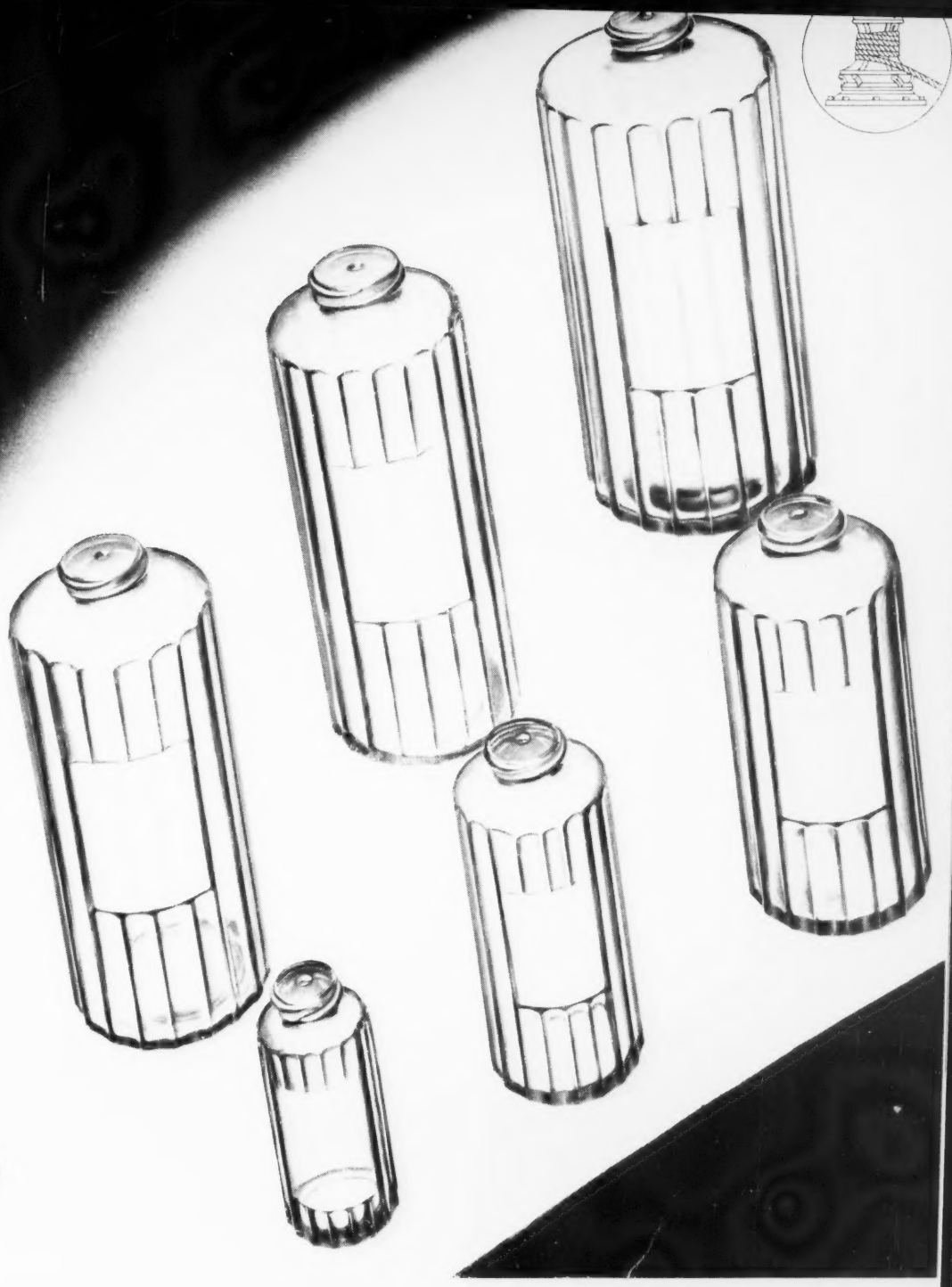
PRODUCERS OF STABILIZED AND BIOLOGICALLY ASSAYED WHEAT GERM OIL — VITAMIN E

Anchor CAPS


PUNCTURE. OPEN LIFT OFF WITH ANY HOOK OPENER
TO REMOVE LIFT OPENER TO CLOSE PRESS ON
TO OPEN USE ANCHOR OPENER OR ANY HOOK BOTTLE OPENER
TO REMOVE LIFT OPENER TO CLOSE PRESS ON

CHAMPIONS—A prize fighter or a tennis player need be only a shade better than his opponent to become a champion. But that slight superiority is the difference between success and mediocrity. Closures pose the same problem. The slightest deficiency in sealing protection and the cap is not good enough. If it does not come quite up to the mark in appearance or in convenience, there is a very real loss in package effectiveness. So we say, "Choose your closures carefully." ¶ Anchor has specialized in just one thing, sealing glass containers, for over a generation, ever since the glass packaging industry was in its infancy. It knows the value of greater care in manufacture, is constantly developing improvements in Anchor Caps scientifically devised to provide ever more in service. Hence, each of the styles shown is a champion in its own sphere of usefulness. ANCHOR CAP & CLOSURE CORPORATION, Long Island City, New York, and Toronto, Canada. Branch offices in all principal cities.

Capstan GLASS



Analyze as you will all good points of other packaging materials, the fact still remains that nothing can even remotely take the place of glass. It's sales impelling! It's confidence inspiring! Instinctively consumers favor products packed in glass.

Capstan Glass is glassware at its best. All the facilities at Capstan's modern plants, every piece of our efficient, up-to-date equipment and machinery, are designed for one purpose only . . . to make the finest, most uniform, most trustworthy commercial glassware possible to produce for an almost limitless variety of products. When thinking of glassware, ask Capstan for recommendations. CAPSTAN GLASS COMPANY, Connellsville, Pa. *Associate Company:* SALEM GLASS WORKS. Branch offices in all principal cities.

THE MOST *Flexible* FILLER YOU HAVE EVER SEEN

So versatile it will fill practically *any* kind of container with almost *any* kind of material, the Stokes & Smith Universal Filler, with Gross Weight Scale, comprises four different machines in one single unit. These are:

1. *A gross weight scale with auger feed.*
2. *A volumetric filler measuring material by the volume of the package.*
3. *A volumetric filler measuring material by the turns of the auger, a very precise way for the smaller quantities.*
4. *A packing machine to compress the material into packages.*

Changing from one type of container to another, even from any paste to free-flowing powder, is only a few minutes work.

May we arrange a demonstration for you?

STOKES & SMITH Co
PACKAGING MACHINERY — PAPER BOX MACHINERY
4915 Summerdale Ave., Philadelphia, U. S. A.
British Office: 23, Goswell Road, London, E. C. 1

S & S G-1 Filler

The refreshing scent of Pine Forests has always held an appeal to the public.

A Pine soap or bath preparation so perfumed recalls vacation days. Gives a sensation of cleanliness and health.

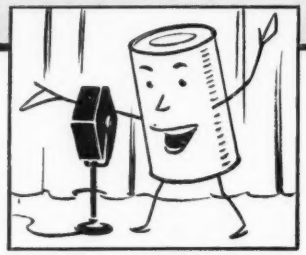
For exquisite Pine odors for Soaps and Cosmetics, **AGFA ISO BORNYL ACETATE** is an ideal base.

Special odors will be furnished by our laboratories on request.

Agfa

AGFA AROMATICS DIVISION
GENERAL DRUG COMPANY
170 Varick Street New York, N. Y. 1220 West Madison St. Chicago, Ill.
Transportation Bldg. Los Angeles, Cal. 907 Elliott St. West, Windsor, Ontario

your package is the VOICE OF YOUR PRODUCT



Be sure it's a friendly, smiling voice—one that encourages a purchase. An attractive modern container by Canco will speak well for your product, and help persuade the customer to buy.

REDESIGNED TO SPEAK MORE DISTINCTLY

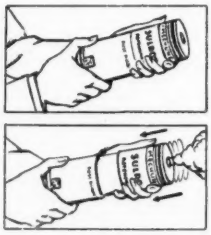
Canco designed this new metal container to give better, wider shelf display to the front of the can. It is lithographed in bright colors, and has a new nozzle that prevents spilling when contents are poured into spray can.

THIS ONE SHOUTS FOR SALES

This smart, modern container with redesigned, spirited lithography tells a successful sales story for the product it contains. Canco has many container design-ideas that are anxious to sing the praises of *your* product.

VOICE OF SALES-EXPERIENCE

This attractively lithographed container (designed by Canco) gives a successful sales talk all day long. Its colorful, clean-cut design is seen and heard from window, counter and shelf. Write Canco today for help in designing a container for *your* product.



ACTION TOP FOR CONVENIENCE

The upper part of this fibre duster-canister slides up and down, spraying the contents out through the perforations on top. This sales-package stands out above the crowd...being, all-in-one, an eye-appealing container and easy-to-work dispenser.

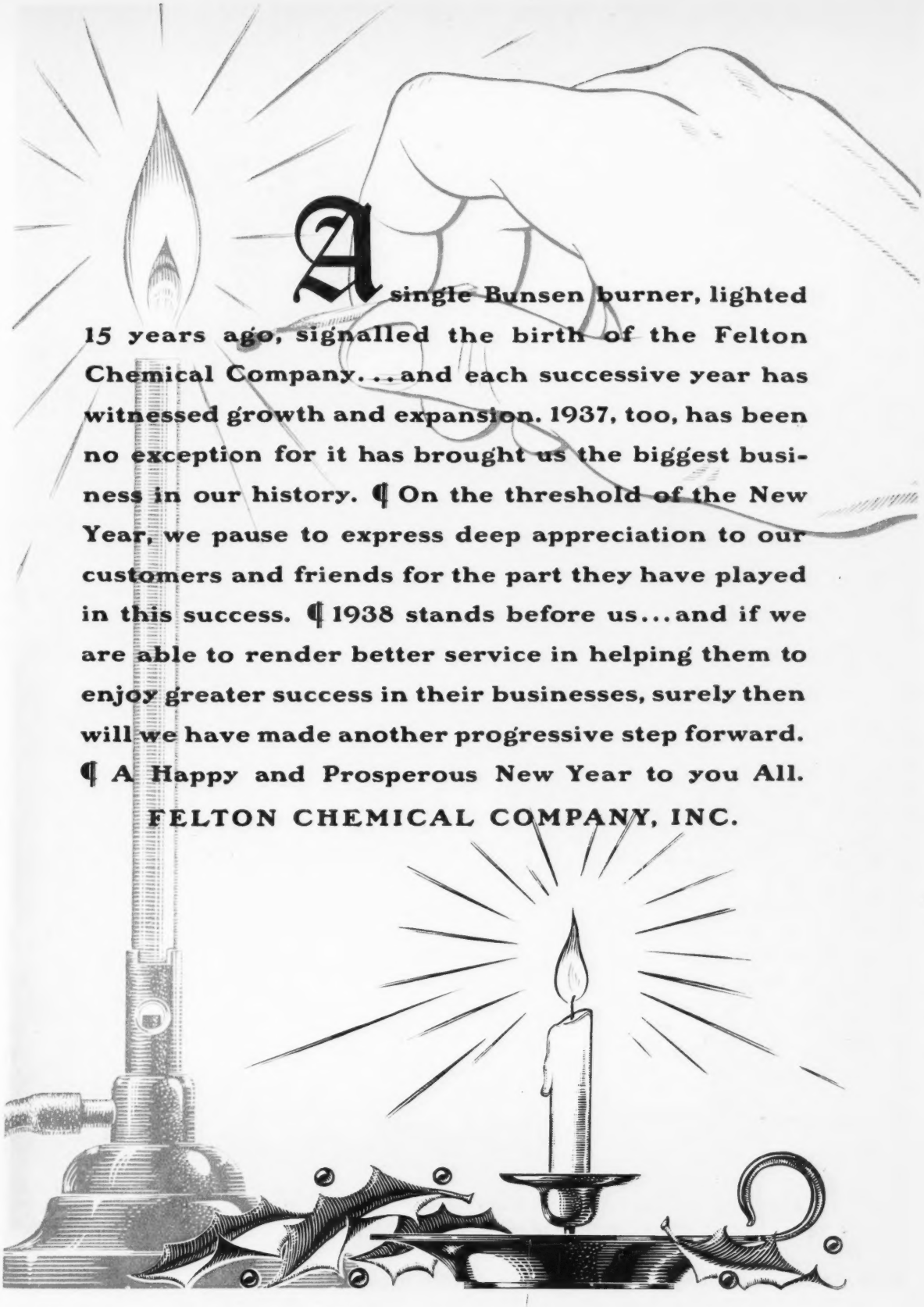
CANCO

AMERICAN CAN COMPANY

230 PARK AVENUE, NEW YORK, N. Y.

104 SOUTH MICHIGAN AVENUE, CHICAGO 111 SUTTER STREET, SAN FRANCISCO

WORLD'S LARGEST MANUFACTURER OF METAL AND FIBRE CONTAINERS

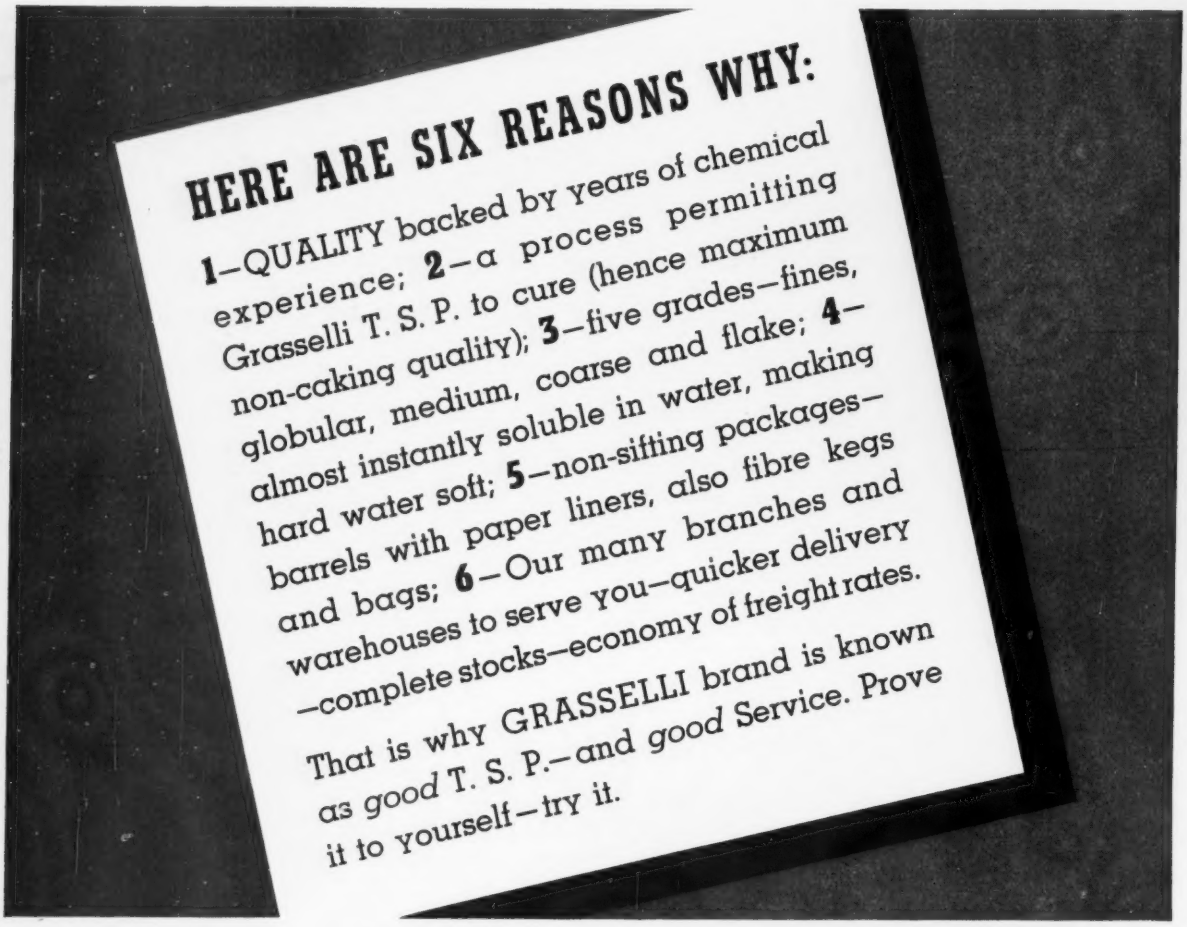


A single Bunsen burner, lighted 15 years ago, signalled the birth of the Felton Chemical Company...and each successive year has witnessed growth and expansion. 1937, too, has been no exception for it has brought us the biggest business in our history. ¶ On the threshold of the New Year, we pause to express deep appreciation to our customers and friends for the part they have played in this success. ¶ 1938 stands before us...and if we are able to render better service in helping them to enjoy greater success in their businesses, surely then will we have made another progressive step forward. ¶ A Happy and Prosperous New Year to you All.

FELTON CHEMICAL COMPANY, INC.

GRASSELLI
T·S·P

MEANS GOOD TRI-SODIUM PHOSPHATE · · · GOOD SERVICE


HERE ARE SIX REASONS WHY:
1—QUALITY backed by years of chemical experience; 2—a process permitting Grasselli T. S. P. to cure (hence maximum non-caking quality); 3—five grades—fines, globular, medium, coarse and flake; 4—almost instantly soluble in water, making hard water soft; 5—non-sifting packages—barrels with paper liners, also fibre kegs and bags; 6—Our many branches and warehouses to serve you—quicker delivery—complete stocks—economy of freight rates.
That is why GRASSELLI brand is known as good T. S. P.—and good Service. Prove it to yourself—try it.

E. I. DU PONT DE NEMOURS & COMPANY, INC.

DU PONT

GRASSELLI CHEMICALS DEPARTMENT

GRASSELLI

Wilmington, Delaware

Albany, Birmingham, Boston, Charlotte, Chicago, Cincinnati, Cleveland, Detroit, Milwaukee, New Haven, New Orleans, New York, Philadelphia, Pittsburgh, St. Louis, St. Paul, San Francisco, 584 Mission St., Los Angeles, 2260 E. 15th St.

Represented in Canada by CANADIAN INDUSTRIES, LTD., General Chemicals Division, Montreal and Toronto

Not even the Chinese . . .

Could find a flaw in the Dependability of the time tried Clifton Plan. It comprises a line of Profitable Sanitary Products you will be proud to handle,—under attractive imprint labels if you prefer.

Inquire today (no obligation) about Liquid Soap, Base, Dispensers, Floor Scrub, Oil Soap, Deodorizing Blocks and Containers, Metal Polish, Rubless Wax, Furniture Cream, Silver Polish, Shampoo, etc.

CLIFTON CHEMICAL CO.

246 FRONT ST. NEW YORK

The Yankee Clippers were fast ships. They got to market quicker than any other ship of the time.

Among the valuable products they hauled from the Orient in the old days were crude drugs used as deodorants and insecticides. But with all the clippers' speed, wind as a motive power was unreliable. It made the importation of these materials expensive and consequently limited in use.

Times change . . . and just as steam superseded sail, new chemicals replaced the use of older forms of moth killers and deodorants. Today, Para-dichlorobenzene, like the steamship, is the sure, fast, profitable way to your market.

Solvay Para-dichlorobenzene is manufactured in America. Its supply, as a chemical derivative, is certain. It takes but a few days from the time it is made at the Solvay plant, until it is available on the market under your own label. In transparent packaging, glass jars, patent cans, and treated with attractive colors and perfumes, it reaches your market quickly and brings fast profits!

Solvay Para-dichlorobenzene is supplied in carefully graded sizes (fine, medium, coarse and super-coarse crystals, and for block manufacture). Return the coupon below for full information.

SOLVAY

TRADE MARK REG. U. S. PAT. OFF.

PARA-DICHLOROBENZENE

SOLVAY SALES CORPORATION
40 Rector Street, New York

Gentlemen: Please send me complete information on Solvay Para-dichlorobenzene.

Name.....

Address.....

City.....*State*.....

Dept. AJ

NEW

Super odor for Fly Sprays

KEROMA

FLY SPRAY MANUFACTURERS
SALUTE "AROMATICS" *NEW*
1938 MODEL **FLY SPRAY ODOR**

USE FROM 1/8 to 1/4 OUNCE TO
THE GALLON OF YOUR **FLY SPRAY**

COST ONLY 2 CENTS PER GALLON
TO CORRECT YOUR FLY SPRAY ODOR
AND GIVE IT CONSUMER APPEAL

SEND FOR SAMPLE
AND MAKE YOUR TESTS NOW
FOR NEXT SEASON

VANASPRA
THE VANILLA SPRAY ODOR
SEND FOR SAMPLE

VITACENE
THE FLORAL SPRAY ODOR
SEND FOR SAMPLE

AROMATIC PRODUCTS, INC.

15 East 30th Street, New York City — Factory: Springdale, Conn.

ATLANTA 432 Marietta St., N.W.
FITTSBURGH 727 Grant Building
CHICAGO 205 West Wacker Drive
SAN FRANCISCO 503 Market Street
BOSTON 80 Boylston St.

Through the Centuries with Alkalies

Long before the Roman era, glass making was an advanced art in Egypt, though contrary to the general assumption, the Egyptians undoubtedly learned it from a still earlier people. Some beautiful specimens of Egyptian glassware belonging to the XVIII Dynasty are still preserved. Here we see Egyptian glass makers forming the fused sand and wood ashes (soda) into hollow vessels.

The refined soda of today contains none of the variation of quality common to the early production of natural soda. As produced under COLUMBIA'S system of rigid control, uniformity approaches the absolute; impurities, the vanishing point. COLUMBIA Control enables you to BE SURE that every shipment is like every other; every bag of soda ash, every drum of caustic, like every other. You can depend upon COLUMBIA.

COLUMBIA

SODA ASH
CAUSTIC SODA
SODIUM BICARBONATE
MODIFIED SODAS
LIQUID CHLORINE
CALCIUM CHLORIDE

THE COLUMBIA ALKALI CORPORATION

BARBERTON • OHIO

NEW YORK CHICAGO BOSTON PITTSBURGH
CLEVELAND CINCINNATI ST. LOUIS MINNEAPOLIS

POWER TO GIVE SERVICE

Extra power to give you fine service is the heritage of Niagara's long pioneering experience. Because Niagara products are made with special attention to quality and uniformity, we take pains to see that you get the most out of these properties. If you need technical service regarding the use of Niagara's Para or any other Niagara products call on our experienced technical staff.

NIAGARA PARA
(Unadulterated Paradichlorobenzene)

Niagara
ALKALI COMPANY
50 EAST 42nd STREET, NEW YORK, N.Y.

Associated with Electro Bleaching Gas Co.
Pioneer Manufacturer of Liquid Chlorine

MARRED CAKES?

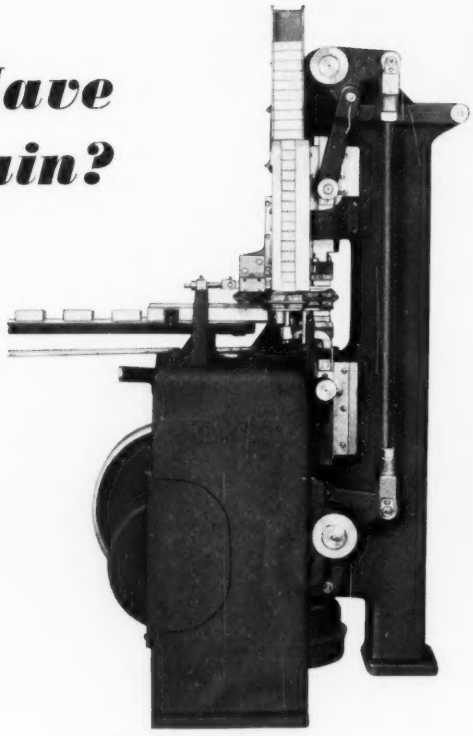
How Many Do You Have To Mill and Press Again?

JONES

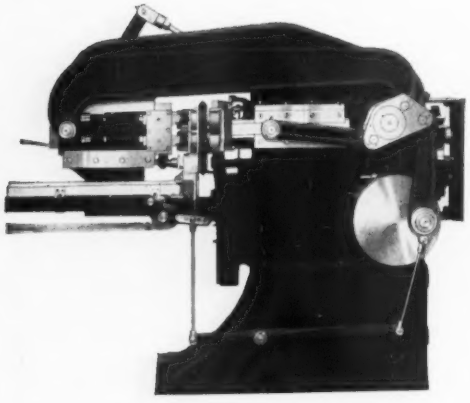
New Toggle

SOAP PRESSES

Avoid Such Waste



Type ET Toilet Soap Press



Type K Laundry Soap Press

AVOID waste and obtain clear, sharp, clean pressing . . . fine looking cakes of soap . . . better salability . . . with JONES new toggle operated SOAP PRESSES which you cannot get with older, obsolete models . . . perfect pressing . . . no marred cakes . . . lower pressing cost . . . no noise or vibration . . . all of which should lead you to look into the matter *now* of replacing your old presses with new, modern JONES SOAP PRESSES.

R. A. JONES & COMPANY, Inc.

P. O. BOX 485 CINCINNATI, OHIO

The Standardized *Constant Motion Cartoner* packages, bottles, jars, tins, collapsible tubes and many other articles. It feeds, folds, and inserts direction sheets and corrugated board liners with the loads.

As the editor sees it....

SOAPS which are not made wholly from olive oil, and which bear the title, "Olive Oil Soap," are again attracting the fire of the Federal Trade Commission. The Commission maintains that any soap labeled as olive oil soap shall be made from olive oil, and nothing else,—that is unless the names of the other fatty ingredients are displayed with equal prominence on the label. All of which carries us back five or so years to the famous castile soap litigation of the Commission, which litigation cost the taxpayers of the U.S.A. a barrel of money, ended up nowhere and proved nothing, except perhaps that the word, "castile," is meaningless in the parlance of the modern soap industry.

In alleging unfair competition in cases where the olive oil content is only ten or twenty per cent or even less, the stand of the Federal Trade Commission appears to be well taken. However, in cases where the olive oil content is over fifty per cent, or where the soap in addition to olive contains ten or fifteen per cent of coconut oil for obvious reasons, it seems to us that the Commission is straining a point or two. In short, we believe that if the bulk of the fatty content is olive oil, the public interest is being protected,—and beyond this, the Commission is splitting technical hairs and wasting time which might well be spent in other more productive directions.

LARGER production of most oils and fats with a level of prices lower than those of 1937, appears to be the accepted expectation for 1938. Those who spend much time in studying the basic factors underlying the oil and fat markets seem in agreement on the outlook. In addition to better yields of domestic animal fats and greases, the higher prices of 1937 have given a stimulus to the production of vegetable oil which means an increase in production of close to a half-billion pounds in the United States alone. A sharp increase in cotton oil, based on a large bulge in the cotton crop, is outstanding in this expansion. All told, it is expected that total fat and oil production during the current season will exceed five billion pounds, the largest ever recorded.

Face to face with these facts, there are soapers who do not anticipate that oil and fat prices will go much below present levels. They hold that this gigantic production has already been discounted in price levels. They state that oil stocks in the hands of soapers are not heavy and that the reduced buying of the past few months will be made up by heavier demand during the first quarter of 1938—all of which is a matter of conjecture. As usual, only time will tell the true story, and those who guess correctly, will profit accordingly.

COMPARING business of this October and November with that of the corresponding months a year ago, some manufacturers give evidence of being shocked because there has been a decline. A few of them already seem to be scurrying for the wind-cellar. All of which goes to show that a comparison of business by months from year to year is poor practice and basically unsound. It stands to reason that a continued upward trend in business cannot go on forever. A reversal, even a sharp reversal, of a long uptrend is not an unmistakable sign that things

have started to the dogs. That which has gone before, must be taken into consideration,—and this was never more true than it is right now at the tail end of 1937.

For the first half of 1937, in anticipation of higher prices, and strikes, and to meet a greatly accelerated demand for all kinds of commodities, shipment of goods was very, very heavy. We believe that most manufacturers and others will admit that they bought considerably more than their anticipated near-by needs. They overbought purposely and knowingly. And during the past few months, they have been working on those excess stocks, partly perhaps with a view to cutting down inventories as the end of the year approaches. So, of what real significance is it that November of this year was behind November of last year, or the year before? What the figures for the entire year of 1937 will tell in comparison with 1936 will be a far sounder basis for drawing comparisons.

THE recent sulfanilimide elixir tragedy which rocked the manufacturing drug trade and the medical profession to their respective foundations, has something of a back-door interest to soap and glycerine producers. The wholesale loss of life resulting from the administration of a diethylene glycol elixir of sulfanilimide to numerous ailing persons in various parts of the country, was a shocking occurrence. That it could happen in this day and age, is almost unbelievable. But, it did occur,—and subsequent investigations showed clearly that the sulfanilimide was altogether blameless for the tragedy. To the diethylene glycol contained in the elixir,—and the elixir was a wholly untried and untested product,—the deaths are laid, according to reports.

If our memory serves us, it was diethylene glycol which was publicized far and wide a year or so ago by the maker of a well-known brand of cigarettes as a substitute for glycerine,—a "safe and less toxic" substitute for use as the hydrating agent in cigarettes. And if you please, we believe it was none other than that holy-of-holies, the American Medical Association, which gave this diethylene glycol-cigarette ballyhoo its blessing.

Now, the thought has occurred to us that if this glycol is deadly as an ingredient of an elixir, can it be such good stuff for humans to inhale in their cigarette smoking. We were just wondering about this and thinking that maybe glycerine is not such bad stuff after all. Possibly Dr. Morris Fishbein, chief explainer for the A. M. A., could explain this one too if he would condescend to do so.

TO GO further into this recent sulfanilimide elixir case, we believe that its consequences are going to be far-reaching even into the field of soaps, cosmetics, and sanitation products. To those who have actively fathered a new and drastic food and drug law, this tragedy gives an opportunity which has never existed before. It gives to the Food and Drug Administration, which has considered all the proposed new laws far too weak and inadequate, a whip-hand over future legislation. The chances are more than even, according to those who should know, that strict licensing of manufacturers will be a part of a new law to be enacted by Congress,—licensing not only of drug, pharmaceutical, and cosmetic manufacturers, but of all products which may come under a food and drug law,—and this includes many soap products, and even insecticides and disinfectants.

Unfortunate it is, indeed, that law-making bodies can be hurried into direct action by a widely publicized tragedy. But it has always been true, and undoubtedly will be in this case. The proponents of a drastic new law will not let Congress forget, even though the fatal mistake was the error of only one company. Manufacturers the country over are going to pay for that mistake, and on this, they can bet their bottom dollar. Not for a minute have we ever questioned the sincerity of Dr. Walter G. Campbell, head law enforcement officer of the F.D.A., but we do question the wisdom of some of his more drastic proposals, particularly licensing manufacturers.

Hydrogenated Soap Fats

By C. R. Kemp

J. R. Watkins Company

HYDROGENATED oils have assumed a much more prominent place among raw materials for soap manufacture during the past year or so. The lower cost of hardened fats in the face of sharply higher tallow prices has been the chief factor in the rise in importance of the hydrogenated products at the soap kettle. Just as in past years, the market balance today between tallow and hardened oil prices accounts for the changing trends in the consumption of these materials. During the past year, interest in hardened fats has been at the peak, due undoubtedly to both the direct and indirect effects of the excise taxes which artificially sustain the price of tallow at a higher level.

Given a chance to choose a good grade of tallow of right color and odor, the soap maker naturally will select it in preference to a corresponding grade of hardened fat,—that is, at an even price and with all other factors being equal. The soaper can make a better soap with tallow, is more accustomed to handling it at the kettle, and is not limited in its use. However, hardened oils have shown features which tend to offset the natural preference for tallow, particularly their attractive prices along with good color and odor. Thus, where hardened fats are used in the soap kettle, they are used as substitutes for tallow, palm oil, and other high-melting fats. At the kettle, they behave similarly to these fats in saponification and yield about the same amount of glycerine for recovery.

There are, however, factors which limit the use of hardened fats at the soap kettle. Chiefly, these are the tendency of the finished bar of soap to crack if the proportion of hardened fat is too great, and the lowering of the solubility of the soap and consequent reduction in lathering properties. In the manufacture of toilet soaps, up to 30 per cent of hydrogenated oil may be used without bad effects if the other fatty raw materials are so arranged to balance the effects of the hardened fat. In the manufacture of laundry soaps, slightly higher percentages may be used, particularly if rosin is incorporated

in somewhat more than average proportions, as the rosin imparts additional solubility to the soap and tends to counteract the reduced solubility effects of the hardened oil.

Today's hydrogenated oils of commerce give the soap maker a wider latitude of selection than was the case some years back. The average hardened fish oil,—and this comprises the bulk of hardened fat going to the soap kettle,—has a titre of from 42 to 45. However, hardened fats to meet definite specifications of soapers are being manufactured and these are being supplied in any titre required. If a soaper wants a fat with a titre of 38, for example, he can have it produced to his own specifications.

Always the demand for solid fats for use in the manufacture of soaps and for edible products has greatly exceeded the demand for the liquid fatty oils. Consequently, solid fats have always been more valuable and have commanded better prices. The fats which occur in nature as liquids at ordinary temperatures have always been available in far greater quantities than those which are solid. Thus, until the advent of practical hydrogenation about a quarter-century ago, finding uses for the unsaturated glycerides and finding a sufficient supply of high-melting-point fats was a dual problem. The conversion of the liquid fats into solid fats solved the problems of use and supply, but injected other problems into the markets for the fatty raw materials.

Early history of attempts to accomplish this conversion records many methods and failures so far as practical results were concerned. It is recorded that Sabatier (1897-1905) showed that certain organic compounds combined with hydrogen to form the corresponding saturated derivatives when exposed in a state of vapor to the action of certain reduced metals, especially nickel. Norman in 1902 stated that liquid fats and fatty acids could be hydrogenated in the presence of certain metals such as platinum, palladium, copper and nickel. It then required but a comparatively few years to work out the technical details of a practical process.

With this accomplished, enormous quantities of liquid fats have been hardened in the past 30 years. At one period since the development of the process of hardening these fats, the production proceeded so rapidly as to exceed the natural demand and there occurred a period of readjustment wherein a number of plants were closed and those operating did so with little or no remuneration. Present indications are that a balance has been struck whereby the production is on a profitable basis. During periods of overabundance of natural hard fats, the producers of hydrogenated fats of necessity accept less remuneration. During periods of scarcity of natural hard fats, the hydrogenated fats always tend to restrain unduly high prices for natural fats.

Among the oils most frequently hardened are cottonseed, coconut, whale, fish, soya, linseed, peanut, sesame and the various fatty acids. Cottonseed oil is used in far greater quantities than the other oils mentioned, and almost exclusively for edible products. The crude oil, refined by the caustic soda process, is allowed to settle out the "foots" or soap stock. The refined oil which may show a refining loss from seven to twenty per cent, is hydrogenated. During the process of hydrogenation, the free fatty acids, the unsaponifiable matter and the saponification value remain almost unchanged. The refractive index and the iodine number are reduced. These conditions apply to other oils also. Completely hydrogenated cottonseed oil melts at 62° to 63° C. and the weight of the oil is increased about 0.7 per cent.

According to Jamieson, shortenings in the United States made from cottonseed oil melt from 35°C. to 43°C. and have an iodine number from 60 to 75, saturated acids 27 to 33, iso-oleic acid 7 to 18, and linoleic acid 5 to 12 per cent. The greater the elimination of the linoleic acid, the better keeping qualities the product will have.

The soap manufacturer's interest at the present time is in the fish and marine animal oils. Among the fish oils are herring, salmon, sardine, menhaden and Jap fish. The usual method of producing these oils is by digesting the whole fish in water with open steam, although some oil is produced by expression. The average oil content of the whole fish in this class is about 15-20 per cent.

The oils, in addition to hardening, also find their way into commerce as substitutes for linseed oil, in the manufacture of technical soft soaps, and in the leather industry. A surprisingly good hydrogenated fat is produced from this class of oils. Fats of excellent color, good odor and up to 45° to 46°C. titre are being produced at present. While they are not suitable as complete substitutes for some of the natural hard fats, a good percentage may be employed.

Until 1910, the beginning of commercial fat hydrogenation, whale oil was regarded as just another oil similar to fish oil and its use was confined mainly to the leather industry. But with the advent of hydrogenation, here was a cheap oil which produced a hardened fat not so much inferior to tallow. Ships were fitted with modern rendering equipment, to accompany the whaling fleets. Whale oil of high quality was placed upon the market. Hardened whale oil was produced in sufficient quantities that the price of tallow fell to such levels that the producers of the hardened oil found it unprofitable to continue. There was some doubt also as to whether whales were not in danger of gradual extermination. More recently the question has arisen whether the oil produced by these "mother ships" is to be regarded as imported and therefore subject to a duty and excise taxes.

Taken as a whole, the average oil used today for hydrogenation will absorb nearly 1 per cent of its weight in hydrogen. From this, it is calculated that 1,000 lbs. of fat will require 2,000 cu. ft. of hydrogen. Small plants will produce 500,000 lbs. of hardened fat

The weighing-in of fatty raw materials shows increasing quantities of hydrogenated oils going to the soap kettle.

per week, thus consuming at least one million cubic feet of hydrogen. Thus it can be seen that hardened fat production might readily be classified as an industry by itself.

The best hydrogen for catalytic purposes is electrolytic hydrogen and in the absence of cheap water power, the most expensive. Recently a large American manufacturer of electrolytic caustic soda has entered the fish oil hardening industry, as a move to utilize his by-product electrolytic hydrogen, most of which heretofore had been wasted. The results of this venture will certainly be watched with interest as it may have considerable influence on the future production and marketing of hardened fats.

A variety of methods have been devised for the hydrogenation process which without detailed comment may be classed as "wet" and "dry" methods. For those interested in the details of the various methods, the work of Ellis[1] is recommended. The quantity of catalyst required to bring hydrogen into reaction will vary but may be in quantities up to 0.5 per cent. The "wet" method has gained favor due to the ease of preparation and much less elaborate equipment required.

Hydrogenation plants are in operation with capacities of from 1,000 lbs. to 30,000 lbs. of oil per charge. In the "wet" process nickel salts are reduced in oil. The great activity of the catalyst produced, its strong resistance to poisons, long life, and the extreme simplicity and economy of the process recommend this method. The accuracy of control produces uniformity in the catalyst which results in uniform product in hydrogenation.

A charge of refined vegetable oil mixed with the proper quantity of dry, pulverized nickel formate is pumped into the catalyzer reducing tank. The nickel formate is kept in suspension by means of an agitator and the mass brought to reduction temperature. A small quantity of hydrogen is blown into the oil and vented to the atmosphere to carry off the gaseous products of the reaction, — hydrogen, carbon dioxide and carbon monoxide. Reduction is continued under controlled temperature until a sample drawn from the sampling tube shows that the greenish color has disappeared and the sample is jet black. This reduction requires from two to four hours, depending on the time required to bring the oil to the reduction temperature and the speed at which the reaction is allowed to proceed.

During the catalyst reduction, the oil itself is partially hardened. The reduced mass can be very conveniently cast into blocks and stored for future use or transferred directly to the catalyzer mixing tank. Because of the great activity and the high resistivity to poisons, it is seldom necessary by this process to make more than one or two batches of

[1] Hydrogenation of Oils by Carleton Ellis.

catalyzer per week when operating to capacity.

The old "dry" reduction method requires more elaborate apparatus. On account of the high temperature used and the nature of this process, there is an element of risk involved which does not exist in the "wet" reduction process. The apparatus is a revolving tube set in a direct fired furnace. The metallic salt is charged into the tube and reduction conducted in an atmosphere of hydrogen till the vent gases show little or no moisture. Eight to ten hours are usually required for the reduction, after which the tube is allowed to cool with hydrogen passing through it. The tube is then opened and the reduced nickel transferred to oil or melted fat.

The temperature used in the "wet" reduction process, is considerably below that used in "dry" reduction, and this is one reason for the superiority of the catalyzer. The oil used as carrier for the nickel is improved in color during reduction and is used with the next oil charge in the convertor.

Charging the convertor: A Catalyzer Mixing Tank is provided to facilitate the mixing of catalyst with a portion of the oil charge outside of the convertor. Catalyst taken from the filter press is immediately transferred to this tank and mixed with a little oil to keep it from solidifying. The heated charge of oil and catalyst is pumped from the catalyzer mixing tank to the convertor and the balance of the oil charge is added.

Hardening: With the agitator on and oil in circulation, the oil in the convertor is heated to the starting temperature, vacuum is pulled on the convertor to remove air and moisture. Hydrogen is then blown into the charge through the perforated inlet pipe. The gas pressure is built up to 60 pounds per square inch. With new catalyst and refined oil the gas is absorbed rapidly and the hardening may be completed in 30 to 45 minutes. In large installations, eight hours is usually allowed for one complete cycle, three batches being run per day of 24 hours.

Since the reaction is exothermic, it is necessary to cool the oil during hardening if it rises above the desired temperature. This cooling is accomplished by a cold water coil inside the convertor or by circulating the charge through external cooling coils and returning to the convertor through spray nozzles. The temperature of the charge is readily controlled by the speed of the oil circulating pump. The converter is vented from time to time and vacuum pulled to remove moisture and inert gases accumulating from impure hydrogen.

The time necessary to complete the hardening varies from 20 minutes to 8 hours and depends upon the following factors: 1. Activity and amount of catalyst. 2. Purity of hydrogen. 3. Character of oil or fat; whether crude, refined or semi-refined. 4. Type of oil or fat; whether cotton oil, fish oil, etc. 5. Hardness desired. 6. Temperature. 7. Pressure. 8. Intensity of the mixing. The completion of the hardening is determined by testing a sample taken from the convertor for index of refraction or melting point.

In this hydrogenation process, the equipment is so designed that the oil-catalyzer mixture is circulated by pumping and is sprayed through the atmosphere of hydrogen in the top of the convertor. The hydrogen gas is also circulated by pumping it from the top into the bottom of the convertor. The convertor is also equipped with an effective agitator for stirring the oil, catalyzer and gas in the convertor. The effect is a most intimate contact of the reacting materials which accounts for the exceptional results obtained and the short time required by this process.[2]

After the hardening operation is complete, the hydrogen is shut off, the circulation of the hardened oil is continued and the oil is cooled by means of the cooling coil until the temperature has been reduced to a point at which it is practical to filter. When this temperature has been attained the valve to the filter press is opened and the return valve to the convertor is closed. The charge is then pumped directly from the convertor through the filter press where the catalyst is completely removed from the hard fat. The press is opened up and the nickel scraped from the cloth and returned immediately to the catalyzer mixing tank for use in the next batch.

If the hard fat is to be stored or held for any length of time, it is put over a chilling roll. The fat comes from the roll in the form of flakes and can be conveniently sacked. The melted fat can be put directly onto the roll or can be run from the press into an intermediate tank in the melted condition, but if handled in this way usually darkens in color. When the hardened oil is to be used for soap making, it can be pumped direct to the kettle from the filter press.

Oil which is partially hardened for vegetable shortening is run directly from the filter press to the deodorizer. After deodorizing it is chilled and made into shortening.

HARDENED oils have a number of qualities which make them a capable and desirable substitute for certain natural hard fats. However there are certain factors which limit their use as substitutes. For example in preparing certain edible compounds, it has been found that it is better to use a smaller percentage of high melting point hardened oil along with natural fats, than to attempt a large percentage substitution of lower melting point hardened oil.

No doubt exists but that hardened fats are attractive commodities to the soap maker under present oil and fat market conditions. With correct handling in soap manufacture, they offer numerous possibilities which should tend to increase their consumption. New products of hydrogenation of interest to the soaper may be expected in near-by future developments, it seems logical to believe. In fact, the possibilities of hydrogenation are such that the installation of fat-hardening equipment on a small scale by a number of medium and smaller size soap makers would not be surprising.

[2] O. H. Wurster, "The Operation of W. & S. Hydrogenation Plants." (Private publication.)

The Newer Detergents

Second of a series of articles on recent developments and patents in wetting, emulsifying and detergent agents

By Charles E. Mullin, D. Sc.

AMONG the many wetting, emulsifying, and detergent agents now offered to the textile and other industries, the alcohols, particularly the higher fatty alcohols, occupy a very important position. For this reason, the present installment of this series will be devoted entirely to this one chemical group, and they will be considered in more detail than can be given to the other chemical groups. Although the production of these products on a commercial scale, and their use in industrial processes are developments of the last ten years, the idea of using compounds of this type in detergent processes is not new. The technical success of this group dates from the commercial development of a cheap source of the higher fatty alcohols. Until ten years ago, the higher fatty alcohols were more or less rare and far too expensive for use in industrial detergents. It is only since the discovery of the reduction process for the manufacture of these technical alcohols on a commercial scale from cheap raw materials, and at comparatively low costs, that the higher fatty alcohol compounds have become of great interest and widely used.

Some years ago, when the first of the new synthetic detergents appeared on the market, they were suggested and recommended for practically every actual or imaginary wet process in almost all industries. On this basis, they were widely and joyfully accepted by those connected with many industries and special processes, but, much to their later disappointment, it was soon found that these new products had neither the wide application nor the efficiency, even where they were applicable, that the first reports and much of the early advertising, etc., led users to believe. The first products were soon followed by many others, to most of which extravagant claims were attached.

Most of the users of these products are busy men, hard at work every day, and every hour of the day, in pushing plant production or processing. In most cases, it was, and still is, impossible accurately to evaluate the efficacy of these new products by simple laboratory tests, so that actual plant trials are necessary. After the busy plant managers, superintendents, foremen, etc., had been disappointed a few times, they developed a distrust of all of the new synthetic detergents, assuming that none of them was really worth their high cost for actual plant use. On this basis, the new synthetic competitors of soap failed to gain ground in competition with soap for use in most detergent processes, but they were used in many special processes, where their special properties warranted their increased cost, and particularly as wetting agents.

The development of the higher fatty alcohol sulfates and sulfonates put new life into synthetic detergents. The wide publicity they received, the fact that they can be used in neutral, acid or alkaline solutions, that their alkaline earth salts are also detergents so that they can be used in water of almost any hardness, together with the fact that in some cases they actually are several times as efficient detergents as soap, or even more so in hard water, led to a decided revival of interest in all of the newer detergents and wetting agents. Although there was already a number of good wetting agents on the market, these fatty alcohol products were the first really successful and highly efficient detergents, and it appears that this group may include some of the products of greatest commercial interest, value, and the widest practical use for many purposes, of any of the many new chemical groups found to be of value as detergents.

It may be of interest at this time briefly to state the properties and advantages of the higher fatty alcohol compounds, as a class, now offered on the market as detergent and wetting agents. These properties will be considered in more detail later.

1. As *wetting-out agents*, they surpass the earlier detergents, including both soap and sulfonated oils.

2. They are among the best of the known *detergents* and, under certain conditions, are at least several times as efficient as soap.

3. They are excellent *emulsifiers*.

4. They have excellent lathering properties.

5. Their calcium and magne-

sium salts are "soluble" and act as detergents, so that they are resistant to hard water.

6. They are quite resistant to acids, so can be used in acid baths.

7. They are not readily saponified by alkalies, so can be used in processes such as the kier-boiling of cotton under pressure.

8. They are not affected by sea water.

9. They do not split to free alkali ions in aqueous solution, hence their solutions are not alkaline and no alkaline residue remains in or on the material being treated.

10. Even the unsaturated products have a high resistance to oxidation and show no tendency to develop odors due to rancidity.

11. They have excellent softening properties when applied to textile materials.

12. They are sufficiently low in cost to be of interest for use on a large scale.

Practically all of the really efficient detergent agents now in use, and most of the wetting agents, contain some hydrocarbon in the molecule. Frequently this is an aliphatic chain, less often an aromatic ring with one or more short aliphatic side chains. A water-soluble group is also necessary and, in most of the new synthetic detergents, this is generally either a SO_3H— or a SO_4H— group. It is interesting to note how many of the new synthetic detergents, etc., contain groups or radicals either identical with, or very similar to, those found in our older friends, the ordinary soaps.

It has long been recognized that the carboxy (COOH) group, or its residue, as in soap, sulfonated oils, and all related detergent and wetting compounds, is the weak point in their resistance to hard water. Many attempts were made to alter or block the carboxy group, and so increase the calcium and magnesium resistance of the compound, while still maintaining the solubility of the compound in water. For example, the amidation and esterification of the carboxy groups, and even its reduction to the alcohol radical to give us the higher fatty alcohols. Both the straight chain and cyclo aliphatic amines are resistant to hard water.

As a class, compounds with a SO_4H— end group are better detergents than those with a carboxy end group. They have much the same general detergent properties, and the SO_4H— compounds have the advantage of better resistance to hard water and low pH (acids). Notice that the above applies to SO_4H— *end* groups.

In detergents of the long aliphatic chain type, the length of the chain is a very important factor in the efficiency of the compound as a detergent. Up to a certain point, the longer the chain, the greater is the detergency of the compound. In the sulfonation of oils, for example, castor oil, esterification of the hydroxy group first occurs. With stronger reagents and unsaturated oils, such as oleic acid, acid groups are also added at the unsaturated double bond, to one of the carbon atoms. In saturated oils, such as palmitic acid, acid can be added to the carbon atom carrying the carboxyl group. True sulfonic acids of oils, where the sulfur atom of the acid is directly connected to a carbon atom, are seldom found in textile oils. Intrasol is probably one of the few true sulfonate oils.

In sulfonated castor oil, the sulfuric acid groups are attached to the ninth and twelfth carbon atoms of the long chain, at the hydroxy group and the double bond. This leaves the carboxy group still present, on the end of the chain, and free to combine with the alkaline earths present in hard water. In both cases, the presence of the acid group in the middle of the carbon chain gives the resulting compound characteristics similar to those of a product with a shorter carbon chain, that is, it decreases both the oiliness or fatty character of the compound, as well as its detergency, so that it is neither as good a lubricant or softener for textiles, nor as good a detergent, as might have been expected from a compound of the same carbon chain length, but where the acid (solubilizing) group is attached to the *end* carbon atom. However, all of the sulfonated oils do have the increased resistance to acids and some substantivity for the textile fibers.

In the case of both the higher fatty alcohol sulfates and sulfonates, the sulfate or sulfonate group is attached to the end of the carbon chain, in the position formerly occupied by the carboxy group, so that they have the full advantage of their long carbon chains. Also, as the carboxy group is absent, they react quite differently with the alkaline earths of hard water, have the desired increased resistance to acids and can be used in aqueous solutions of low pH.

The fatty alcohol sulfates and sulfonates do combine with the calcium and magnesium present in hard water, and it is possible that these salts are not as soluble as the corresponding sodium salts. They may be soluble only to the colloidal state, so that the alkaline earth alkyl sulfate and sulfonate salts may be present only in the colloidal condition, but they are not thrown out of solution on standing, etc., and have detergent properties similar to those of the corresponding sodium salts. In fact, it has been stated that *none* of the wetting and detergent agents now in use give calcium salts that are truly soluble in water. They are merely in colloidal solution, but are not precipitated on standing and have detergent or wetting properties. This is probably true of many of the other wetting and detergent agents that are resistant to hard water.

Higher Alcohols Investigated

AS would be expected, many of the alcohols have been investigated in connection with the development of new synthetic detergents and wetting agents. As a whole, the fatty alcohols containing from ten to thirty carbon atoms have proven of greatest interest and value for industrial uses. The present commercial products are all derived from saturated or partly unsaturated (oleyl only) fatty alcohols containing from

twelve to eighteen carbon atoms. Apparently, the following present commercial advantages, of course, including availability in quantity at a reasonable price:

1. Lauryl or dodecyl alcohol, $CH_3(CH_2)_{10}CH_2.OH$, (C_{12}).

2. Myristyl or tetradecyl alcohol, $CH_3(CH_2)_{12}CH_2.OH$, (C_{14}).

3. Cetyl or hexadecyl alcohol, $CH_3(CH_2)_{14}CH_2.OH$, (C_{16}).

4. Stearyl or octadecyl alcohol, $CH_3(CH_2)_{16}CH_2.OH$, (C_{18} saturated).

5. Oleyl or octadecenyl alcohol, $C_8H_{17}CH{:}CH(CH_2)_7CH_2.OH$ (C_{18} unsaturated).

At the present time, we hear less about the myristyl alcohol (2) products than the others, although it is probably present with others in several of the technical products. The oleyl and lauryl products are particularly in demand for detergent processes, the stearyl compound for softening textiles, etc., as in finishing. The cetyl products are at present of less commercial interest.

It will be noticed that alcohols 1, 2, 3, and 4, above, have the general formula $C_nH_{2n+1}.OH$, where n is in each case twelve or more. Primary alcohols with less than twelve carbon atoms are not good detergents, but some of the lower primary alcohols do have a considerable effect in lowering the surface tension of their aqueous solutions, without particularly aiding the detergent action. For example, the use of isopropyl alcohol in automobile wind shield cleaners, etc. Those with more than eighteen carbon atoms are not of as great interest, on account of their lower solubility at low temperatures. Oleyl alcohol has the general formula $C_nH_{2n-1}.OH$, but its unsaturated bond so alters its properties as to render it soluble at lower temperatures.

The first higher fatty alcohol detergents offered to the trade were the technical sodium salts of cetyl, lauryl, oleyl, and stearyl alcohol sulfates and sulfonates. Perhaps certain other compounds of this particular alcoholic type, for example, decyl (C_{10}) alcohol, may be useful as detergents, wetting agents and special emulsifiers but in some cases, the alcohol itself is too expensive at present to permit the industrial use of the corresponding sulfate or sulfonate. On the other hand, since the commercial success of the better known higher fatty alcohol products, there has been a decided trend in research styles towards all of the alcohols, fatty and otherwise, with the result that a number of both United States and foreign patents have been, and are being, granted covering the production of alcohols of somewhat similar to quite different constitution, and their processing, usually, but not always, by processes of the sulfation and sulfonation type, to produce compounds with properties more or less similar to those of the higher fatty alcohol products.

In the same way, while the original patents covered only the sulfates and sulfonates of the higher fatty alcohols, some of the later patents suggest the use of the corresponding compounds of phosphoric and other acids. Other patents cover the addition of various products to the higher fatty alcohol before sulfation or sulfonation. Perhaps some of these later processes may have considerable merit, but each process, patent, or product, must be judged upon its own merits. Some of these processes and products were probably developed solely in order to circumvent the original Bertsch patents. In at least some cases, the patents have little value, except as a nuisance value, as a trading point, or in the defense of infringement proceedings.

Many of the more recent patents covering wetting, detergent, and emulsifying compounds of the alcohol type cover processes for the manufacture of products of the above type, but with alcohols from entirely different sources, for example, certain highly complex synthetic alcohols, secondary and other alcohols from the production of synthetic methanol and other synthetic products, etc. Quite recently, a number of American chemical manufacturers have offered synthetic wetting and detergent agents of the alcohol type, but not containing either cetyl, lauryl, oleyl, or stearyl alcohol as the main component.

Many alcohol products of the condensation, ester, and other types are upon the market, particularly in Europe. In most cases, the alcohols in these newer compounds are not of the higher fatty type. For example, the Emulphores are probably polyether alcohols, compounds of the type of $C_{12}H_{25}(OC_2H_4)_nOH$, where n is more than ten. They do not contain ionizable groups and are generally most useful in dispersing polar compounds, such as oleic or tar acids, rather than the nonpolar compounds, such as the paraffins.

Peregal O and OK are probably fatty alcohol products which apparently do not contain the usual water-solubilizing groups, such as sulfate, sulfonate or carboxy radicals, but depend upon their hydroxy groups for solubility. The O brand has been stated to be the condensation product of octadecyl (stearyl?) alcohol with ethylene oxide. As yet, none of these newer products have come into as wide usage as the higher fatty alcohol compounds.

Fatty Alcohol Sources

ALTHOUGH the higher fatty alcohols have been known for many years, they were usually prepared in the laboratory by the reduction of the synthetic ethyl ester of the corresponding fatty acid with metallic sodium and alcohol. Obviously, they were too expensive for general use on a large scale, and probably their largest use was in perfumes, etc. It is only since the development of the hydrogenation process, whereby the technical alcohols of satisfactory purity are produced in large quantities and at prices which will permit their compounds to compete with the older and better known wetting and detergent agents, that the higher fatty alcohol products have come into such wide publicity and use.

Cetyl alcohol is naturally

present in spermaceti or sperm oil and this fact has long been known. In fact, the use of cetyl sulfonate in detergent processes was suggested in the literature many years ago, long before the patents now of interest were applied for. But it is only since the discovery and development of the comparatively new reduction process for the production of the higher fatty alcohols, by treating the appropriate fatty acids, or their natural or synthetic esters, usually the glycerol esters derived from natural sources, with hydrogen under pressure and in the presence of a suitable catalyst, that it has been possible to manufacture these higher fatty alcohol compounds for industrial use.

The hydrogenation (reduction) process for the manufacture of the higher fatty alcohols was developed by Dr. W. Schrauth and patented by the Deutsche Hydrierwerke A.-G., about 1927, but many of the later patents, particularly those covering the production and use of the sulfates and sulfonates, were granted to H. T. Bohme A.-G. The first United States patents covering the detergent products were granted to H. Bertsch. (These patents will be reviewed in a later paper.)

The reaction of hydrogenation is quite simple:

$$R.COOH + H_2 + \text{catalyst} = R.CH_2.OH + H_2O + \text{catalyst.}$$

Generally, pressures of over one hundred atmospheres are used at about 300°C. (572°F.), with a copper carbonate or nickel catalyst. Normann has suggested a pressure of two hundred and fifty atmospheres and 325°C., with a copper catalyst carried on kieselguhr, from copper carbonate. The production of oleyl alcohol is not quite as easy as in the case of the saturated alcohols, on account of the unsaturated or double bond which is present. At high temperatures, this bond takes on undesired hydrogen, to give stearic acid or stearyl alcohol and, for this reason, lower temperatures are used in the reduction of oleic acid to oleyl alcohol.

Those familiar with high pressure apparatus and synthesis will realize that while the equipment is fairly simple, it is quite expensive and certainly not available in many plants. On the other hand, it is very probable that many firms would install equipment for the manufacture of these higher fatty alcohols if it were not for the patent protection. This will not last forever, as it dates from about 1928 abroad.

The higher fatty alcohols can be separated fairly well from each other, as well as from the accompanying materials, by fractional distillation. After the hydrogenation process, which results in a mixture of higher fatty alcohols, etc., due to the natural mixture of fatty acids or esters generally used as the starting material, the crude mixture of alcohols is purified to some degree by fractional distillation. Most or all of the present commercial detergent and textile finishing products are mixtures of more or less closely related, even number, alcohols, or their compounds, corresponding to the mixed fatty acids present in the original natural oil or esters. Some more highly purified products are available but are generally used only for special purposes, where the results warrant their higher price. They offer little advantage over the ordinary technical products for most detergent and textile uses.

At first it was practically impossible to purchase any of the higher fatty alcohols on the open market, in quantity and at a reasonable price. Cetyl alcohol, from spermaceti, was the first to be offered. More recently, most of the others have become available. Eventually, probably all those of interest will be available at much lower prices than at present, along with other alcohols not yet known to be of interest for the manufacture of wetting and detergent products. On account of the importance of a cheap source of these alcohols to all those interested in the manufacture of products of this type, a considerable number of the patents covering their production will be reviewed later.

Differences Between Alcohols

THOSE familiar with the differences in the properties of our ordinary soda soaps, such as those of oleic acid ($C_8H_{17}CH:CH(CH_2)_7COOH$), palmitic acid ($CH_3(CH_2)_{14}COOH$), stearic acid ($CH_3(CH_2)_{16}COOH$), etc., will not be surprised at the graduated and more or less closely related differences in the properties of the corresponding fatty alcohol compounds. As might be expected, from our knowledge of the soaps, the longer chain saturated fatty alcohol compounds, as a whole, are less soluble at the lower temperatures than the corresponding compounds with shorter carbon chains. On this basis, some authorities have claimed that these longer chain alcohol sulfates are less efficient as wetting agents and detergents than the shorter chain sulfates. At low temperatures, say below 40°C. (104°F.), this assumption is apparently correct, but it is probably entirely due to the lower solubility of the longer chain sulfates.

Lauryl alcohol sulfate has good penetrating, leveling and dispersing properties at room temperature and in this respect is far superior to the corresponding stearyl compound, but at the boil, the stearyl sulfate is the better detergent. Some believe that the detergent properties, as distinct from their wetting-out properties, of the saturated higher fatty alcohol sulfates, reach a maximum with the compound containing sixteen carbon atoms in the chain, that is, cetyl alcohol, and that the cleansing power decreases with either an increase or a decrease in the number of carbon atoms in the molecule.

Others have stated that both the oleyl and lauryl compounds are the best detergents. Perhaps the results vary somewhat with the temperature of the tests, as well as the type of soil and other conditions. It must also be remembered that for some time cetyl alcohols was the only member of the higher fatty alcohol group commercially available, and that it is possible to select test conditions in such a manner so as to

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POTASH SOAPS

A discussion of European specifications, raw materials, manufacturing methods, and classification of soft and liquid soaps

By Joseph M. Vallance
London, England

SOME confusion has always been apparent in the trade regarding the composition and classification of the various types of soft soap. This in turn seems to have led to an amazing diversity of official and semi-official standards and specifications, some of which are quite impractical in the extreme narrowness of their requirements while others are so broad as to mean little or nothing to the practical soapmaker. In general, however, it may be stated that the term "soft soap" is designed to cover not only pure potash soaps but also those that consist of potash and soda soap mixtures, with the former soap in most cases predominating.

Thus we find that the German (1925) Specifications state that "soft soaps may be either pure potash soaps, such as natural fig soaps, or a mixture of potash soap and soda soap, such as silver soaps—the latter so-called by reason of their pale, opalescent appearance. Where soda soap is employed, it is only in a proportion quite small when compared with that of the potash soap. Pure soft soap should be clear, smooth, homogeneous and translucent, and should contain not more than 1 per cent free alkali as potassium hydroxide, not more than 8 per cent insoluble in alcohol, at least 38 per cent total fats,—and 5 grams of the soap should give a clear solution in 100 c.c. of hot water." Natural "fig" soft soaps are described as soap in which oils with little or no stearine are mixed with fats of high stearine content and their fatty acids (tallow, palm oil etc.), the figging formed during storage being due to crystallization of the potassium palmitate or stearate.

While there are no official U.K. specifications for soft soaps, it is interesting to note that the department of Public Health, Victoria, Australia, specifies soft soap as being "the product derived from the action of a solution of potassium hydroxide, with or without sodium hydroxide and potassium silicate, on fats, oils, or resins, or any mixture of same. It shall contain not less than 40 parts per centum of fatty and resin acids, of which not more than one-third may be resin acid. It shall contain not more than 3 parts per centum of silicates, calculated as sodium trisilicate."

Apart from such general standards, there are of course to be taken into account the pharmaceutical specifications affecting various countries. Some of these present certain interesting features, notably in regard to vitamin F-containing materials; they will therefore be considered more closely a little later.

Meanwhile the numerous uses to which soft soaps are commonly put may be conveniently grouped together. In the first place, there are the industrial outlets which in all cases call for first-hand knowledge of actual market requirements. Thus slightly variable types of soft soap may be supplied to cotton mills for the treatment of cotton, to tanneries for use in leather liquoring, and to textile manufacturers for the scouring of raw wool. It is impossible to differentiate exactly between the various types of soft soap offered for these purposes in view of the market variations in different localities, and the fads and fancies of individual purchasers.

In my own experience, however, I have found that cotton mills usually demand a straight potash vegetable oil soap based mainly on linseed, cottonseed, soybean oils etc., with occasionally a moderate admixture of rosin,—the soap usually being finished on the akaline side. For the purposes of wool scouring, a soft soap may well be based on caustic potash and caustic soda, together with vegetable oils (such as olive) and oleine. Sometimes palm oil, horse grease and tallow are used to give figging, while often the water content is high enough to necessitate the presence of a little free alkali and extra potassium carbonate to preserve the "body" of the soap and help to inhibit stringiness.

On the other hand, some of the soft soaps sold to textile mills are in reality nothing but cleverly devised gels of caustic soda soaps made with soft oils, while again, the higher class type are commonly straight potash soft soaps, essentially similar to those used for pharmaceutical purposes. As for tanneries, some are reputed to have a preference for olive oil soft soaps made from foots, but requirements vary considerably from one locality to another.

Soft soaps in the form of automobile soaps are of course sold to garages, as well as to the general public. They are sometimes mixtures of soda and potash soaps, although plain potash soaps are much preferable. They should be finished neutral, in order to be certain that they are harmless to automobile finishes.

According to the British Pharmaceutical Codex, pharmaceutical soft soap is used to remove incrustations in chronic scaly skin diseases, such as psoriasis, and to cleanse the scalp previous to the application of antiseptic lotions. A solution in industrial methylated spirit, with the addition of methylated ether, is used by surgeons to cleanse the skin. For rectal administration a solution of 1 part of soft soap in 30 to 40 parts of warm water is employed. Linimentum Saponis is a mild counter-irritant used to rub sprains, contusions and rheumatic joints, and to dilute more active liniments.

For household use, soft soap is specially recommended for cleaning floors, linoleum and paintwork. For this purpose it is sometimes found as a figged soap, the natural figging being due to the attractive crystallization of a small proportion of hard soap in the colloidal soft soap base, while artificial figging can be induced by the presence of chalk or other insoluble fillers adroitly dispersed in the base. I most fully agree with Dr. R. L. Datta that figging in a soft soap is of no importance, and in fact is best avoided since, in trying to produce the phenomenon, the proper and desirable texture and consistency may be interfered with. In this connection, it may be noted that one of the leading British household soft soaps is of a smooth translucent appearance and is furthermore designated "camphor soft soap." Similar household types of soft soap are also sold to horticulturists, for use in solution in the spraying of insecticides. A further widespread employment of soft soap technology is to be found in the manufacture of liquid soaps, liquid disinfectants, coconut oil and similar shampoos, jelly shampoos and shaving lotions.

Kettle Charges

TO proceed from the above general picture to a consideration of soft soap types from the angle of actual soap making, it will probably be most satisfactory to deal with typical kettle charges in some detail. First, however, it is essential to start with a definite aim in mind, and to this end we may well agree that an ideal soft soap should be homogeneous, short-grained, neither sticky nor plastic, attractive in appearance, free from gelatinization or stringiness, and either opalescent or translucent, as occasion demands.

It goes without saying that, to make a non-stringy soap with caustic soda alone, the use of castor oil is absolutely essential. No stock other than castor oil is able to form permanent non-gelatinous soaps with caustic soda only. It is, however, possible to introduce varying proportions of other stocks into such a kettle charge, and so make a presentable soft soap by means of caustic soda and without the aid of caustic potash. For Soda Soft Soaps of this type blends such as the following may be tried (all parts by weight):

(a) Linseed oil 35; castor oil 50; rosin 15.

(b) Castor oil 45; linseed oil 40; corn oil 5; rosin 10.

(c) Castor oil 45; linseed oil 35; coconut oil 5; rosin 15.

(d) Linseed oil 50, cottonseed oil 5; castor oil 40; rosin 5.

Naturally, it is obvious that only the very softest stock combinations may be utilized to form soft soaps with caustic soda alone. These charges give homogeneous, non-stringy soaps that sometimes tend to become opaque during the winter, but are otherwise quite effective as soft soap substitutes. During the War such soaps were widely produced in place of potash soaps, due to the high cost of potassium hydroxide. When caustic potash is brought into the picture, the total hardness number of such kettle charges can be of course very considerably increased, although even with potash there are decided limits to the fats and oils that can satisfactorily be made into soft soap.

Among the raw materials that we find most widely used in soft soap manufacture may be cited the following: Linseed, cottonseed, corn, groundnut, soybean and castor oils; olive oil and olive oil foots; rosin and oleine (red oil);—and, to a much lesser extent, coconut oil, palm kernel oil, palm oil, tallows and greases,—as well as additional ingredients such as phenol, camphor, ammonium chloride, turpentine, perfumery materials and dyestuffs;—and sometimes fillers such as potassium chloride, sodium silicate, sodium sulfate and potato flour.

Rosin in Soft Soaps

THE fatty acid content of commercial soft soaps normally ranges from 33 to 44 per cent, the former type being characterized by their high rosin content. Although rosin is occasionally ruled out of soft soaps that must comply with certain specifications, the fact remains that it is possible to produce quite a good class of rosin soft soap containing up to 10 per cent of rosin, while some soft soaps on the market contain as much as 25 and even 30 per cent.

To incorporate rosin in a soft soap calls for a certain amount of practical experimentation, for a soap containing a high proportion of rosin is always considerably thicker when hot than when cold. This means

that the soap in the kettle is often so thick as to require ladling out or pouring from the top (if a tilting-type jacketed kettle is used), being too viscous to run off in the usual manner. The soap when cool will soften down, if correctly made, to the desired consistency, and must on no account be finished on the alkaline side, or it will be too thin to be marketable. With lower proportions of rosin, this phenomenon will not be in evidence.

Some excellently balanced kettle charges have been devised by Dr. R. L. Datta and P. K. Ghose of the Bengal Department of Industries, a few of which may well be given here. These workers recommend the following charges for straight potash soft soaps, although I find that they can also be used with caustic soda forming about 10 per cent of the total alkali, without giving rise to stringiness:

(a) linseed oil 40; cottonseed oil 20; groundnut oil 20; tallow 20.
(b) linseed oil 50; cottonseed oil 20; groundnut oil 20; tallow 10.
(c) linseed oil 60; cottonseed oil 30; rosin 10.
(d) linseed oil 50; cottonseed oil 20; groundnut oil 20; tallow 5; rosin 5.

The following are suitable for KOH 80 per cent and NaOH 20 per cent; and KOH 70 per cent and NaOh 30 per cent, respectively:

(a) linseed oil 67; cottonseed oil 10; groundnut oil 13; tallow 5; rosin 5.
(b) linseed oil 73; cottonseed oil 15; coconut oil 2; rosin 10.

As previously mentioned, it is possible still further to increase the caustic soda at the expense of potash by introducing a proportion of castor oil into the fat charge. The phenomenon of "figging" has already been referred to, and the fact will readily be appreciated that a soap that remains clear and smooth during warm weather may exhibit quite extensive figging during the winter months. For this reason the fat charge needs to be carefully adjusted to withstand seasonal changes, particularly in countries where temperatures show marked variation in the course of the year. Thus A. A. Horvath has pointed out that for "summer soap" considerably more soybean oil is commonly used than in "winter soap."

For a satisfactory all-weather soft soap, I suggest a fat charge comprising linseed oil 65, soybean oil 30, coconut oil 5, rosin 10. Similarly, a "summer soap" could be made from 50 to 60 per cent soybean oil, the rest being linseed or cottonseed oil, with possibly a small proportion of rosin.

As raw materials, linseed, corn, soybean and cottonseed oils seem, as we have shown, to predominate. Soybean oil is more readily saponifiable by caustic potash than by caustic soda, and because of its low stearine content (its fatty acids being mostly linoleic and oleic), it is particularly suitable for use in the manufacture of smooth, non-stringy soft soaps that are resistant to freezing, clear, translucent, and of an attractive golden-brown colour. Horvath, whose work on soybean oil is deservedly well known, recommends the addition to the caustic potash lye (when using this particular oil) of a little potassium carbonate. Thus 100 lb. of oil requires about 40 lb. of a 50° Be caustic potash lye containing 6 lb. of potassium carbonate. To this, water is added until a concentration of 30° Be is reached.

Use of Semi-boiled Process

MANUFACTURING methods are all based on the semi-boiled process. Plant may vary from direct-fired open kettles to steam-jacketed pans, the most useful type of equipment being a kettle provided with both open and closed steam coils and a discharge valve to facilitate easy cleansing. The alkali may first be calculated to saponify completely and furnish an excess of free alkali in the finished soap that usually ranges from 0.2 to 1.5 per cent, although this figure is sometimes exceeded. With a highly rosined kettle charge, the finished soap should be as nearly neutral as possible. A small proportion of the fat charge may be held over to ensure rapid saponification and for use in finishing.

The caustic solution, which I have found convenient to use at a concentration of 19° Be, is run into the kettle and brought to the boil. The melted charge is then added as rapidly as possible, due care being taken to prevent the contents from boiling over. The mass soon emulsifies and saponification sets in rapidly. During the few hours of boiling required for the completion of the process, potassium carbonate to the extent of 2 to 5 per cent of the total kettle charge, is frequently added in aqueous solution. Less frequently potassium chloride is added,—the idea being to stabilize the finished soap and also improve its appearance. Water may be added as required. When rosin is used, it is occasionally melted in with the oils, but the best plan is to add it after the other stocks have been saponified.

The soap now thickens and becomes glossy, the froth subsiding. The rest of the oil is then added. The texture, stringiness and water content may be roughly tested between finger and thumb. Testing with phenolpthalein for a faded pink coloration is also useful. The consistency of the finished soap is best determined by allowing a sample to cool. When ready, the soap is filled directly into barrels or tinned containers. Sometimes, as Thomssen describes, the soap is run into barrels as soon as it begins to "bunch," the saponification process proceeding to its conclusion in the barrels.

It is interesting to compare the various pharmaceutical specifications for soft soap. Readers will probably be acquainted with the statement recently made by the Board of Standards of the U. S. Toilet Goods Association to the effect that "the use of linseed oil in soap (see *Sapo Mollis* in the current

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WALT DISNEY puts soap in the movies—

IN 1938, soap is going to break into the movies in a big way. What bids fair to be the finest piece of publicity which the soap industry has ever received, gratis or otherwise, will be released to the American public next month. It is a new Walt Disney motion picture, "Snow White and the Seven Dwarfs"—a full-length feature motion picture on which Disney and his 600 versatile assistants have been working for almost four years. The new picture which will be ninety minutes long and in technicolor throughout, is scheduled for release about January 15. This is the first time that Walt Disney, the famous creator of Mickey Mouse, has undertaken a full-size feature, and the first time that he or anyone else has undertaken to make a movie requiring such a length of time for production.

"Snow White and the Seven Dwarfs" is the old familiar fairy tale of the same name. Already over $1,200,000 has been spent on production. Over 250,000 finished individual drawings will have been required for the finished production, and Disney states that if all the drawings were laid end to end, they would reach from New York to Pittsburgh, and the pencils used, if stacked end to end, would rise higher than Mount Everest. At any rate, the motion picture industry is reported agog over this brand-new idea in a feature film. Whereas some four or five years ago, "The Three Little Pigs" took the country by storm, and packed them in the movie houses,—adults and children alike,—this newest Disney creation is promised to be the motion picture sensation of 1938.

And just why should the soap industry get excited over this new movie? And where does soap fit into the picture? Because, the soap-using scenes represent a type of publicity for soap which money could never buy. They are said by those who have seen them, to be the finest and most unique of the entire movie. "Snow White" introduces the Seven Dwarfs to the use of soap in washing their faces and hands,—a new and strange experience for them,—and in cleaning their home,—and

Snow white scrubs and cleans up the home of the Seven Dwarfs with the aid of the birds and animals.

Photo copyright, 1937, Walt Disney Enterprises, Inc.

Photo copyright, 1937, Walt Disney Enterprises, Inc.

their clothes. We have been told that if the soap industry itself directed the production of this picture, and underwrote its cost, that a job more to its liking could not have been done. Without knowing it, the soap industry finds itself tied in closely with this latest,—and he insists, the greatest,—of Walt Disney's efforts.

The advance ballyhoo on "Snow White and the Seven Dwarfs" has already gone far and wide,—the story and pictures have been published to a circulation of ten million in general magazines. In Paris, London, and Berlin, news of the picture is being published almost daily. Disney has received innumerable requests for use of some of the original drawings to exhibit in art galleries and elsewhere. Cartier, world-famous jeweler of Paris, is formulating plans to work motifs from the movie into some of his pieces. American toy manufacturers are already pushing their production of appropriate toys to take advantage of a tie-in with the picture. All in all, the advance build-up is about all that could be expected,—even by Hollywood.

Christmas prevue promotion displays of "Snow White and Seven Dwarfs" will be seen in over 50 large department stores in key cities throughout the United States. Among these stores are: Kaufmann's, Pittsburgh; Jordan-Marsh Co., Boston; The May Co., Cleveland; Mandel Bros., Chicago; Stix, Baer & Fuller, St. Louis; Woodward & Lothrop, Washington, D. C.; and the H. C. Capwell Co., Oakland.

The Seven Dwarfs are introduced to the use of soap and water,—a brand new experience for them.

•

In order to understand the phenomenal influence that has been brought to the entertainment and commercial worlds through the efforts of Disney, let us go back for a moment to 1929. At that time, Disney had been producing Mickey Mouse films for about a year. One day he was approached by a representative of the Geo. Borgfeldt Co., one of the world's largest manufacturers of toys. "We", said the Borgfeldt spokesman, "would like to make Mickey Mouse dolls. If you'll give us permission to do so, and also to use Mickey's name in our advertising, we'll pay you a royalty on every one we sell."

Disney considered the idea, and finally gave his somewhat reluctant consent. He wasn't any too keen about it because he did not consider his characters well-enough known to create any widespread demand. It wasn't long, however, before he was forced to alter his opinions on the subject. In fact, it was soon necessary for him to create a separate company to handle the steadily increasing demand for licenses. This firm is known as Walt Disney Enterprises, and is represented by Kay Kamen, Ltd. with headquarters in Rockefeller Center, New York. In 1936, the sale of merchandise made by U. S. licensees utilizing the Disney characters reached a total of $38,000,000! In its third year as a Disney licensee is the Lightfoot Schultz Company, who model the Walt Disney characters in toilet soap.

Of particular interest to the soap industry, is the house-cleaning sequence in "Snow White and the Seven Dwarfs". This action takes place soon after Snow White has stumbled onto the Dwarfs' house while they are away. The house itself is typical of what might be expected of seven bachelors who have lived together for ten or twelve hundred years. In other words, it

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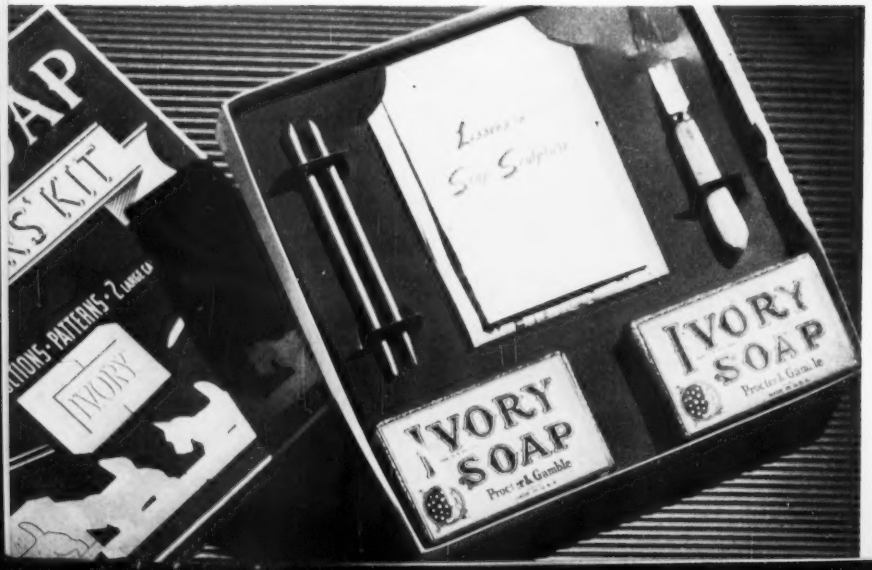
New Products

A Christmas combination from the newly reorganized Pine Tree Products Co. of Newport, N. H., to retail for $1.50, —shave soap bowl, toilet soap, lotion and talc, all in pine needle odor.

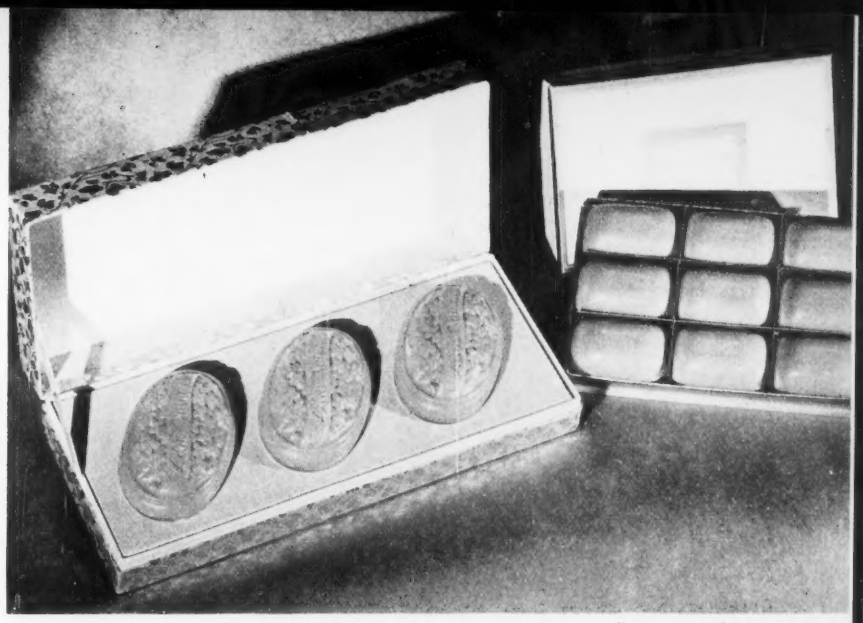
Halo, the new Colgate-Palmolive-Peet soapless shampoo, makes its appearance on the market in a test campaign in Cleveland. Much has been heard of this product for some months, but this is the first time it has made its appearance.



Ivory Soap Sculptor's Kit by Raymond Service of New York, including soap, carving tools, and instructions,—timed for the Christmas trade. Box by Robert Gair Company.

and

Packages



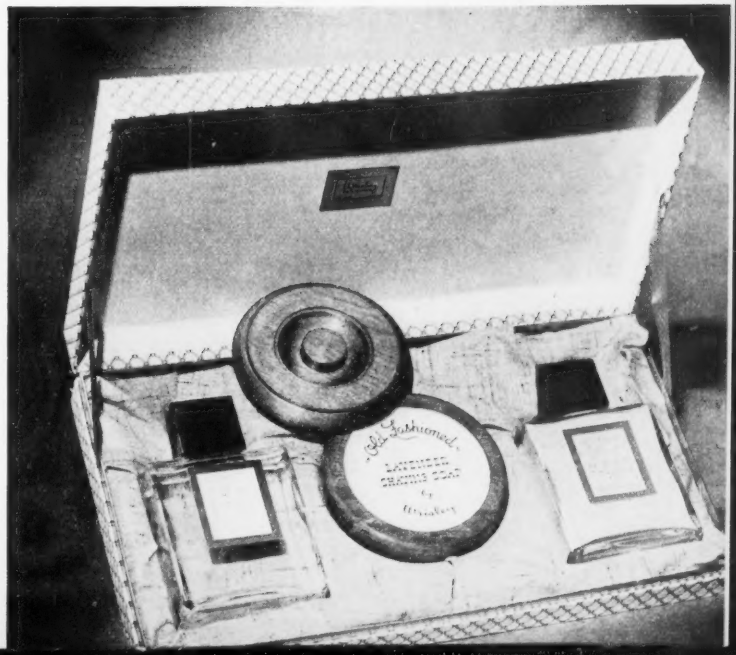
Two new items by Wrisley of Chicago. Lilas Naturelle and Guest Superbe, the former (left) to retail at one dollar and the guest soap at fifty cents per box, —the latter in gardenia, lilac, and pine odors.

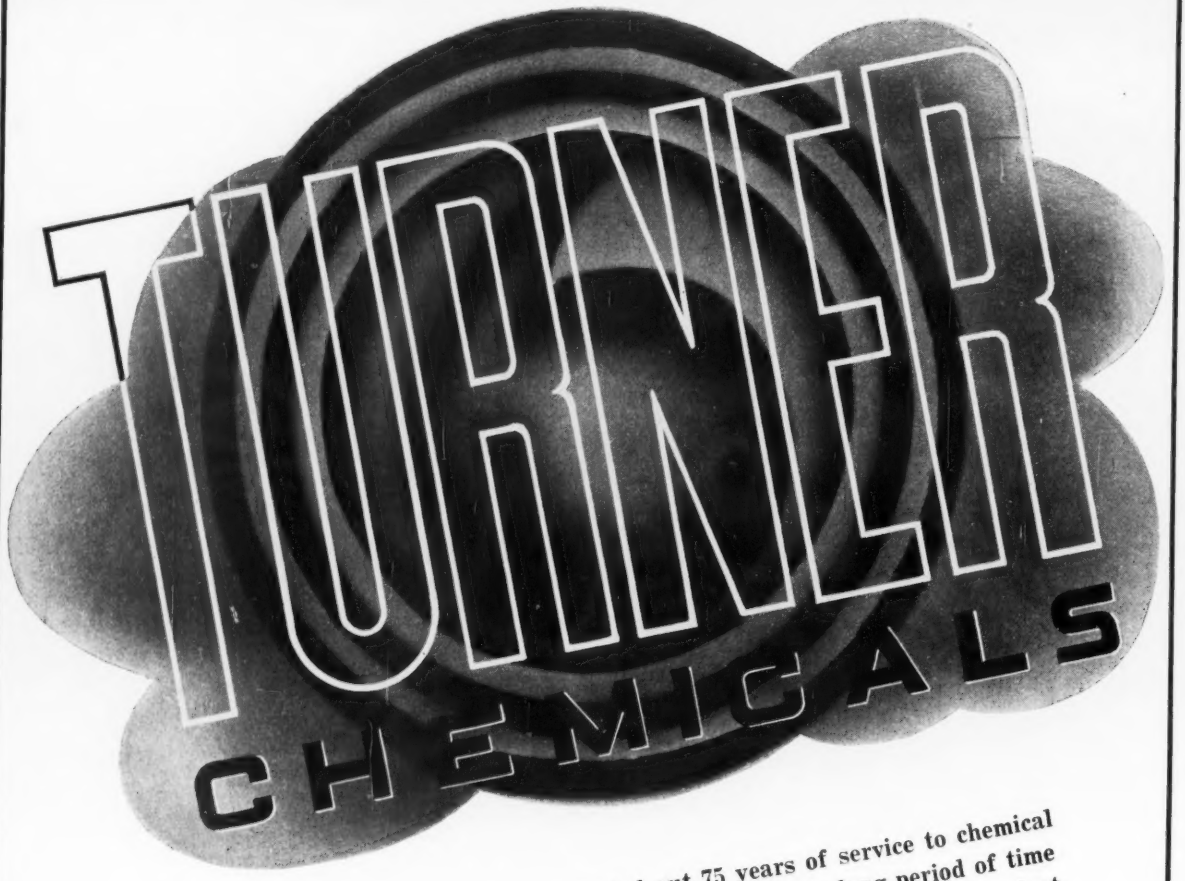
◆

"Saddle Bag" by Pinaud is a 1937 Christmas Gift fashioned after a U. S. Army saddle bag and equipped with shaving cream, lilac, quinine hair tonic and talc, —all in a genuine pigskin kit.

◆

A shaving combination Christmas Gift package,—wooden shave bowl of soap, lotion and talc,—all old-fashioned lavender,—by Allen B. Wrisley Company.





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NEWS . . . . . .

David Kliegman Dies

David Kliegman, partner in the firm of Kliegman Brothers, Brooklyn, laundry supplies, soaps, and chemicals, died recently after a long illnes. He had been in business with his brother for the past twenty years. Mr. Kliegman was 54.

Report on Soap Sales Census

While the sale of soaps in the United States for the first nine months of 1937 showed a decrease of .6 per cent in the number of pounds, as compared with the same period in 1936, value in dollars increased 13.2 per cent over the same period in 1936. Figures for the nine months, just released by the American Association of Soap and Glycerine Producers, show the total tonnage of soap sold in the 9-month period to be 1,949,646,010 lbs., with a value of $195,839,875. Liquid soap sales totaled 1,462,759 gals., worth $1,368,684.

Swift & Co. Advances Holmes

John Holmes, vice-president of Swift & Co., Chicago, since 1928, was elected president of the company at a meeting of the board of directors Nov. 18. He succeeds Gustavus F. Swift, Jr., son of the company's founder, who was made vice-chairman of the board.

To Push Soproco

Soproco, Inc., New Orleans, maker of "Soproco" cleanser and water softener, recently appointed an agency to handle its advertising campaign throughout the South. Dailies, store demonstrations, point of purchase displays, and direct mail will be used.

Soap Talks at Laundry Ass'n

John E. Kelley, of Cowles Detergent Co., Cleveland, and Charles E. Lennox, of Swift & Co., Chicago, spoke at a recent meeting of the Wisconsin Laundryowners' Association, held at Oshkosh, Wis.

Thomssen's 25th Anniversary

The twenty-fifth wedding anniversary of Dr. and Mrs. E. G. Thomssen was celebrated on November 23 at Winona, Minn. Dr. Thomssen, who is chief chemist for the J. R. Watkins Co. of Newark, N. J. and Winona, Minn., is widely known as an author and speaker on technical subjects and as a frequent contributor to the technical journals. The Thomssens have lived in Winona for the past fifteen years during which time Mrs. Thomssen who was Grace May Brinkerhoff of Hackensack, N. J. prior to her marriage, has been active in the social and philanthropic affairs of that city, and Dr. Thomssen has directed the technical destinies of the Watkins interests in the United States and Canada. Dr. and Mrs. Thomssen were married at Hackensack, N. J., Nov. 23, 1912. At that time, Dr. Thomssen was chief chemist for Lightfoot Schultz Co., Hoboken.

Netherlands quota restrictions on imports of toilet soap, which expired September 30, are not to be renewed.

Soap Employment Index

The index of employment in the soap industry for October, 1937, compiled by the U. S. Dept. of Labor, registered 102.5 as compared with 103.1 in September, 107.1 in October, 1936, and 100 as the three-year average for the period 1923-1925. The payroll index for October, 1937, was 122.0 as compared with 122.1 in September and 105.3 in October, 1936.

F. H. Daland Dies

Frederick H. Daland, president of Daland & Co. and Empire Soap Co., New York, died at the age of 71 at St. John's Riverside Hospital, Yonkers, N. Y., on November 21st after a long illness. Mr. Daland was born in New York and had been in the soap business for the past forty-five years. He is survived by his wife, Alma Daland and two sisters, Mrs. Georgia Elder and Mrs. Fannie Norton.

Howard Signs Stipulation

J. A. Howard Distributing Co., Cincinnati, has agreed, under stipulations entered into with the U. S. Federal Trade Commission, to stop using on cartons containing its soap products, on individual bars of soap or in advertising matter, exaggerated or misleading representations concerning the value or the price at which these products are sold in the usual course of trade.

Firmenich in Chicago

Firmenich & Co., New York, perfuming materials, has opened a new office at 844 North Rush St., Chicago. Albert O. Nelson is in charge. Sizable stocks of the Chuit Naef line of aromatic chemicals, perfuming raw materials and specialties are now available to the trade of that territory.

P & G Buy More Land in Chicago

Procter & Gamble Co. recently purchased 21,000 square feet of vacant land adjacent to its Chicago plant. The land will ultimately be used for plant addition.

Assoc. Grocers Hear Cummings

Members of the Associated Grocery Manufacturers, met at the Waldorf-Astoria Hotel, New York, Nov. 29 for a luncheon meeting. Attorney General Homer A. Cummings spoke on "Revision of the Anti-Trust Laws."

Filter Paper Appoints Blons

Filter Paper Co., Chicago, has appointed H. R. Blons of St. Paul, representative for the Twin City district. Mr. Blons replaces Mr. Kaplan who has gone to the Pittsburgh territory. Filter Paper Co. has recently enlarged its customer service laboratory for the convenience of clients who wish to submit samples upon which filtration suggestions are needed.

Japan Replaces Tallow in Soap

Due to a decree prohibiting soap manufacturers in Japan from importing tallow except for use in soaps for export, an intensive search for a suitable substitute is being conducted by Japan's manufacturers. One company says it can produce soap with hardened oil equal in every respect to soap from tallow, and is therefore discontinuing tallow imports almost entirely.

L. J. Zoeller Dies

L. J. Zoeller, 52, head of the health, safety and service department, Procter and Gamble Co., Cincinnati, died Nov. 17.

Cosray Case Closed

Los Angeles Soap Co., Los Angeles, trading as Cosray Products Co., has agreed, under a stipulation with the U. S. Federal Trade Commission, to discontinue certain misleading representations in the sale of "Cosray Vitamin D Soap." The commission's approval of the agreement closes a case which grew out of a complaint issued in June 1937, charging Cosray with inaccurately representing "Cosray Vitamin D Soap" to possess certain therapeutic qualities by reason of its vitamin content.

Ungerer Enlarge Warehouse

Ungerer & Co., New York, have enlarged and redesigned their warehouse at 228 West 20th St. The

new fireproof structure, of five stories and basement, provides a total space of three times that formerly available. The Ungerer main offices remain at 15 West 20th St.

To Fix British Soap Prices

Negotiations have been in progress recently among British soap manufacturers with a view to setting minimum prices for certain classes of toilet soaps. The purpose of the negotiations is to eliminate the severe price competition which has been current in the British soap market over recent months. An attempt is also being made to set up a trade board for British soap manufacturers which would arbitrarily regulate conditions of labor and sales policy within the industry.

Lewis Soap & Chemical Co., Oakland, Cal., has moved its office and showroom to 2210 San Pablo Ave. that city.

Pepsodent Expands Chicago Unit

Pepsodent Co., Chicago, will spend $100,000 on an expansion and remodelling program now under way at their Clearing plant. Plans are to build a cafeteria, add new offices, and install air conditioning. Pepsodent executive offices, now in the Palmolive building, Chicago, will be moved to the new site when completed. Work is scheduled for completion by Feb. 1.

Hirsch to Richards Chemical

Louis S. Hirsch, for many years with B. P. Ducas Co., New York, as vice-president and general manager, has become associated with Richards Chemical Works, Jersey City.

Uphold Kentucky Sales Tax

The U. S. Supreme Court has refused to review a case challenging the right of the Kentucky Commissioner of Revenue to apply the Kentucky sales tax to cosmetics purchased from outside the state. The case was brought before the Supreme Court by J. Bacon & Sons, who sought to restrain the state from collecting the tax. A previous decision by the highest court of Kentucky ruled that the tax was a sales tax applicable alike to domestic and foreign merchandise and could be collected from dealers on receipt of goods. The Bacon firm sought an appeal from this decision, claiming that the tax is not levied against the sale or use of the cosmetics but only on their receipt by retailers, with no provision for refund in case the goods are not sold.

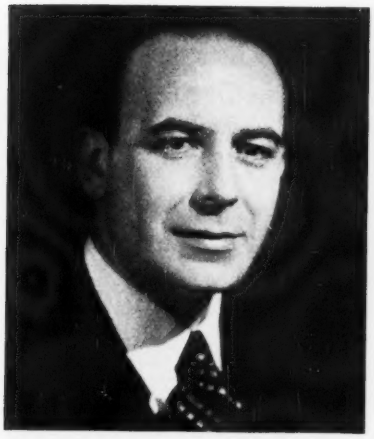
Dry Cleaners' Convention

Members of the National Association of Dyers and Cleaners will meet in their annual convention at the Stevens Hotel, Chicago, January 17 to 20.

William R. Warner & Co., St. Louis and New York, pharmaceuticals, have purchased Johann Strasska, Inc., Los Angeles, toothpaste, and moved the offices of the latter to St. Louis.

Pappazoglou Returns Home

Botu D. Pappazoglou, member of the firm of Botu D. Pappazoglou, Ltd., distillers of otto of rose,



Botu D. Pappazoglou

Sofia, Bulgaria, sailed for home Nov. 10 after a month's visit in the United States. While here, Mr. Pappazoglou, in company with Frederick H. Ungerer, president of Ungerer & Co., New York, his American agents, visited the principal cities of the middle west.

P & G to Build

Procter and Gamble Co. is planning a six-story reinforced concrete addition to the fish products building, also a six-story addition to the oil processing building at its Long Beach, Calif. plant.

Fritzche Salesmen Gather

Fritzche Bros., New York, are holding their annual sales conference this week. Representatives from all over the United States are attending. The conference will end with a dinner dance on Saturday night.

Pennsylvania 44 Hour Week

All workers in Pennsylvania went on a forty-four hour week on December 1, under a new state law. This law is a follow-up on Pennsylvania's forty-four hour law for women, which went into operation on September 1, 1937. Employers in other states may profit by watching results in Pennsylvania. The Pennsylvania situation may indicate some of the effects that may follow the hours-and-wages statute which Congress is expected to pass at the current session for interstate business and industry.

Complete Lever Stock Plan

An offer has just been made to preference and preferred ordinary stockholders of Lever Brothers, Ltd., London, and preferred stockholders of Unilever in connection with the amalgamation of the companies, which now awaits sanction by the Court. One result of this amalgamation will be that £4,500,000 of the 20 per cent preferred ordinary capital in Lever Brothers at present owned by Unilever will be cancelled. Besides this, a further amount of £302,529 nominal of 20 per cent preferred ordinary stock is owned by various subsidiary and allied companies, and this inter-company holding is to be eliminated by the sale of the capital.

Accordingly, this stock has been offered for sale to the stockholders at the price of 20 shillings per 5-shilling unit. This price is an inclusive one covering all stamp duty and transfer fees, the expenses in connection with the sale being borne by the vendors. It compares with an average middle market price, plus expenses of purchase, during the month of October of about 21 shillings.

Putnam Elected Mayor

Roger Lowell Putnam, president of Package Machinery Co. and of National Bread Wrapping Machine Co., both of Springfield, Mass., was elected mayor of Springfield in the recent election. Mr. Putnam, a nephew of A. Lawrence Lowell, president emeritus of Harvard University, first became associated with Package Machinery Co. in 1919 as sales manager. Within two years he was vice-president of the concern and in 1927 became its president.

Hewitt to Head Sales

John S. Hewitt is the new general sales manager of Jergens-Woodbury Sales Corp., Cincinnati. He has been with Borden Co., Pabst and Palmolive.

J. A. Huisking Marks 25th Year

In commemoration of his twenty-fifth year in the drug trade, Joseph A. Huisking, of Charles Huis-

Joseph A. Huisking

king & Co. was honored recently by a group of his friends at an informal luncheon at the Drug and Chemical Club, New York. In honor of the occasion Mr. Huisking was presented with a silver cocktail set by his brother, Charles L. Huisking, on behalf of the Huisking organization.

Ungerer Appoints Budd

Ivon H. Budd has been appointed vice-president in charge of sales by Ungerer & Co., New York. Mr. Budd has been a well known figure in the perfuming materials business for many years. After his graduation from Cornell in 1917 he joined Antoine Chiris Co. Later he was associated with Julian W. Lyon & Co., which became Wangler-Budd Co. He then organized the Budd Aromatic Co., of which he was president. When that company was dissolved in 1935, he joined Ungerer & Co., as sales manager.

Ernest E. Finch Dies

Ernest E. Finch, vice-president and general manager of Karl Kiefer Machine Co., Cincinnati, died recently at his home in Terrace Park, Ohio, at the age of 62. Mr. Finch, who had been with the Kiefer organization for thirty years, was active in association work and was a former president of Canning Machinery and Supplies Association.

For New Savings in 1938

A few of the many well known soaps that are wrapped on our machines.

The new burdens which business in general has to bear call for new savings wherever possible. In the toilet soap business, wrapping as you know, is quite an item.

Now is the time to check up on your machines and methods. . . . A definite comparison with our new fast models may show the way to important economies.

It may also show you the way to a better package. New wrapping materials are constantly coming on the market and novel ideas in wrapping are being developed with them. Printed foil, cellulose or glassine—our machines can handle them all.

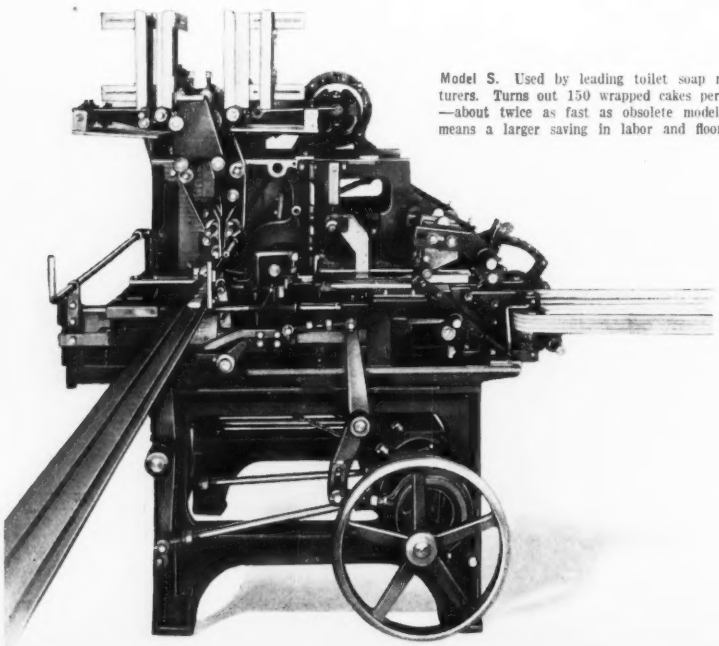
Get in touch with our nearest office.

PACKAGE MACHINERY COMPANY, Springfield, Mass.

NEW YORK CHICAGO CLEVELAND LOS ANGELES

Peterborough, England: Baker Perkins, Ltd. Melbourne, Australia: Baker Perkins Pty., Ltd.

Mexico, D. F., Apartado 2303 Buenos Aires: Argentina: David H. Orton, Maipu 231



Model S. Used by leading toilet soap manufacturers. Turns out 150 wrapped cakes per minute —about twice as fast as obsolete models. This means a larger saving in labor and floor space.

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

Foragers to Banquet Jan. 8

Foragers of America, organization of salesmen in the drug, cosmetic, and allied trades, will hold

Frank L. Graham

their annual banquet at the Hotel Astor, New York, Saturday evening, January 8. Frank L. Graham, eastern sales manager of De Vilbiss Co., will be guest of honor. Tickets can be obtained from A. J. Connolly, secretary, Room 258, Herald Square Hotel, New York.

German Detergent Situation

The drawbacks of the fatty alcohol derivatives as detergents in Germany are due chiefly to the fact that they are of necessity manufactured from fatty materials, the scarcity of which is well-known and appreciated, according to a communication received by *Soap* from Dr. Charles E. Mullin, Huntingdon, Pa., detergent authority and consultant. (A series of articles on the newer synthetic detergents by Dr. Mullin is at present being published in *Soap.*) Dr. Mullin's letter stated in part:

"In reading over the November issue of *Soap*, I particularly wish to compliment you on the editorials. The second editorial, commenting upon the soap and detergent industry in Germany, is very much to the point and gives an excellent summary of the present German situation, with which I am in fairly close contact. As I have endeavored to bring out in the paper now in your hands, (published elsewhere in this issue) the fatty alcohol derivatives are the first really successful *soap* substitutes to be developed on a commercial scale. The fact that they are manufactured from fatty materials, entirely obviates their use in Germany at the present time. On the other hand, the substituted naphthalene products are not made from fatty sources, and are so closely allied with the production of dyestuffs as to be particularly interesting in Germany. However, they are not good detergents when used alone. It is possible that their detergency might be improved by using longer aliphatic chains, in place of the butyl and propyl chains now in more common use, but, of course, this brings them into the fat-consuming group.

As Shakespeare wrote, "Sweet are the uses of adversity," and it is very probable that the present situation in Germany, with its resulting research, may result in the development of products of greater interest and value than are at present commercially available for detergent purposes."

A. D. Armstrong Dies

Arthur D. Armstrong, 54, secretary of Fritzsche Bros., perfuming materials, New York, and president of the Essential Oil Dealers Assn. of the United States, died Nov. 28 at his home, 127 Lincoln Road, Westfield, N. J. Mr. Armstrong had served as chairman of the essential oil committee of the drug, chemical and allied trades section of the New York Board of Trade for several years. He had been associated with Fritzsche Bros. since 1913.

P & G to Award Contracts

Procter & Gamble Co., Cincinnati, will soon award contracts for construction of a four-story and basement administration, research and engineering building at its Ivorydale plant. The new unit, 124 by 159 feet in size, will cost more than $150,000 with equipment.

Fishbeck Price List

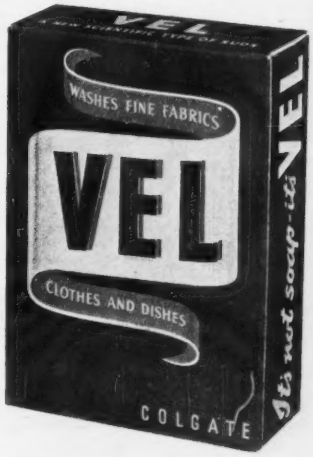
Charles Fishbeck Co., New York, has just issued a new price list of aromatic chemicals and essential oils. Copies available on request.

Leverhulme Scholarship

The Leverhulme Laundry Scholarship for 1937 has been awarded to R. M. Bennet, whose father is a director of Tranmere Laundry, Birkenhead, England. The recipient will attend Liverpool University. The Leverhulme Scholarship is awarded to relatives of members of the Institution of British Launderers, and is for three years. It was instituted to assist study of chemistry by laundry workers.

C-P-P Introduces New Products

Colgate - Palmolive - Peet Co., Jersey City, has just introduced two new detergent products of the soapless type. One of these is "Halo," a new shampoo, which is described as a neutral salt of a sulfonated fatty ester, with the addition of a superfatting agent. It is offered in 10 cent and 50 cent bottles and will be distributed through drug, department and ten-cent stores. A test campaign is now being conducted on the new product in the Cleveland area, and after observation of results there the company will then be in position to announce its plans for national advertising on a broad scale. Another new Colgate product is "Vel," a soapless detergent for washing clothes and dishes. It will be distributed through the grocery trade. Advertising on both new products will be handled by N. W. Ayer & Son. (See Pg. 36 for photo of "Halo.")



OIL OF CEDARLEAF
OIL OF CEDARWOOD

EUCALYPTOL, CITRONELLA, SASSAFRAS Artificial, SAFROL, DERRIS Products, GUM TRAGACANTH, ARABIC and KARAYA.

ORBIS are Specialists in Essential Oils and Aromatic Chemicals for the Insecticide and Disinfectant Industries. ORBIS products are pure, and true to type and name.

OIL OF CAMPHOR WHITE JAP
OIL OF EUCALYPTUS

PRICES AND WORKING SAMPLES UPON REQUEST.

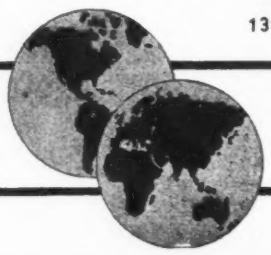
ORBIS

PRODUCTS CORPORATION

215 PEARL STREET, NEW YORK - FACTORY & LABORATORY, NEWARK, N.J.

CHICAGO 844 Rush St.
PHILADELPHIA 253 Bourse Bldg.
BOSTON 131 State Street
LOS ANGELES 742 So. Hill St.

Water Soluble Gums
Filter Paper
Aromatics
Rice Starch
Waxes
Stearic Acid
Essential Oils
Zinc Oxide French



Cosmetic Raw Material
Oleo Resins
Perfume Bases
Olive Oil
Fruit Flavors
Food Colors
Quince Seed
Irish Moss

Argue "Shav Ami" Complaint

The United States Court of Customs and Patent Appeals has taken under consideration the protest of Bon Ami Co., New York, against registration by McKesson and Robbins, Inc., New York, of the words "Shav Ami" as a trade mark for a brushless shaving cream. The complaint, argued in Washington November 8, charged that there is a confusing similarity between "Bon Ami" and "Shav Ami" and that both are of the same descriptive qualities. Bon Ami Co. has registered its trade mark and has spent upwards of $15,000,000 in promoting sales under that title. It protested the appearance of any article on the market which might profit by a similarity of names. Counsel for McKesson and Robbins argued in reply that the names were not so similar that a purchaser might be expected to connect their product with Bon Ami Co.

Chicago Association Meets

The November meeting of the Chicago Perfumery, Soap and Extract Association was held on the 9th at the Lake Shore Drive Hotel. Following the business meeting the members were entertained by Bruce Jordan, Hollywood sound effects man. Plans for the Christmas party on December 9th at the Knickerbocker Hotel have been completed and it is expected to be one of the best affairs in the association's history.

Heads Soviet Soap Trust

Tatiana Morozova has been appointed head of the Soap and Cosmetic Trust of Soviet Russia, succeeding the wife of Premier Molotoff, who has been appointed assistant to the vice-commisar of the food industry.

Disney Puts Soap in Movies

(*From Page 35*)

is in a messy and unkempt state. Thereupon, Snow White takes it upon herself to clean house with the aid of her woodland friends,—the squirrels, deer, birds, rabbits, etc. During this process, comes a series of extremely funny situations based upon washing, cleaning, dusting, and straightening up the house. The entire action of this sequence is made most interesting by the musical theme song which Disney employs. This is a very catchy tune called "Whistle While You Work."

Following this sequence comes another, which also applies itself directly to the soap industry. This is the "washing-up" scene. Here it is that Snow White tells the Dwarfs to wash up so that they will be ready for the dinner that she is preparing. The Dwarfs are plainly amazed at the idea of washing and can't understand that this sort of thing is regularly done by nearly everyone. Thus it is up to Snow White to demonstrate. This she does by showing how you put water on your hands, work your soap into a rich, foamy lather, then rub it thoroughly over your face, neck and ears, and finally duck your head low and rinse.

In this scene, we see "Doc", "Happy", "Sneezy", "Dopey", "Bashful", and "Sleepy" all gathered about a watering trough while the stubborn "Grumpy", in a disgusted mood, is seated on a nearby barrel. It is then that "Doc" takes the initiative and, in a very clever scene, shows the other Dwarfs how to wash. The action continues with "Grumpy" teasing the other six Dwarfs while the latter lather up, rinse off, and emerge all spick and span. As they hover over the wash tub, concluding their ablutions, they plot a trick to play on "Grumpy". They quietly gather about him, suddenly grab him, unceremoniously dump him in the tub, and then proceed to lather and scrub him.

The name "Snow White" in itself appears to have possibilities for commercial associations in the soap and allied fields. Snow White Soap Flakes or Toilet Soap may spring forth. The scenes of the picture may go on to posterity in any number of possible tie-ups. The lyrics from "The Washing Song" may appear as advertising copy, or scenes from the picture for advertising illustration and even package design.

Colgate Issues Prices

Fair-trade contracts were issued to retailers in forty more states which now have fair-trade contracts by the toilet article department of Colgate-Palmolive-Peet Co. on Oct. 15, it was announced by Manning O'Connor, manager of the toilet article department. The company already has fair-trade agreements with retail dealers in New Jersey and California. The new contracts are being issued under the Miller-Tydings law and cover the retail sale of all "Colgate" and "Palmolive" toilet articles and perfumed soaps.

Minimum prices set on typical products for New York State follow: "Colgate" dental cream or powder, giant size, 33 cents; large size, 18 cents; "Palmolive" shave cream or brushless cream, giant size, 37 cents; large size, 23 cents; "Colgate" shave or brushless cream, giant size, 37 cents; large size, 23 cents; "Colgate" or "Palmolive" after-shave lotion, large size, 33 cents; "Cashmere Bouquet" toilet soap, 3 for 25 cents.

Unilever Raises Dividends

Increased ordinary interim dividend rates have been paid by the two Unilever companies. For the British company, the payment was 4 per cent, against 3½ per cent, and for the Dutch company 30 florins on every 1,000-florin share, compared with 25 florins. These dividends were payable on December 1. On the same day both concerns paid dividends for the seven months ending December 31 on their preference capital. This is in accordance with the intentions expressed at the meeting on October 11 last to approve the amalgamation of the members of the group.

Textile Chemists Elect

American Association of Textile Chemists and Colorists, Piedmont section, at its annual meeting in Pinehurst, S. C., elected the following: chairman, Dr. Raphael E. Rupp, of Pacific Mills, Lyman, S. C.; vice-chairman, Edgar Ford, Biltmore, N. C.; secretary, J. W. Ivey, Charlotte, N. C., and treasurer, Grady Miller, Hickory, N. C.

ADVANCE THE "STYLING"

with the METSO SEXTETTE!

THE TREND today is toward silicated cleaners—cleaners which contain larger proportions of Metso detergent alkalies. Buyers like them because of these qualities:

1. High active alkalinity
2. Silica content which restrains corrosive action
3. Sustained cleaning energy
4. Greater bactericidal effect than other sodium salts
5. Free rinsing qualities
6. Attractive appearance

Are you familiar with how a Metso detergent can improve your cleaner? Put more "go" power with a greater margin of safety into your brand with one of the Metso Sextette. Let's talk over your problem.

PHILADELPHIA QUARTZ CO.

General Offices and Laboratory: 125 S. Third St., Phila., Pa.
Chicago Sales Office: Engineering Bldg. Stocks in 60 cities.
Sold in Canada by National Silicates Ltd., Toronto, Ont.

1. **METSO GRANULAR.** Sodium Metasilicate, granulated product.
2. **METSO CRYSTALS.** Purest of Sodium Metasilicate. Uniformly sized crystals.
3. **METSO FINES.** Sodium Metasilicate, finely powdered.
4. **METSO 99.** Pure Sodium Sesquisilicate.
5. **METSO 22.** Integral combination containing Sodium Metasilicate.
6. **METSO 66.** Special Metasilicate cleaner for metals.

U. S. Pat. 1898707
U. S. Pat. 1948730

Contracts Awarded

Fort Sam Houston Awards

Armour & Co., San Antonio, were awarded a contract on 4,500 lbs. soap chips at 8.2c in a recent opening by the U. S. Army Quartermaster at Fort Sam Houston. On 500 qts. metal polish Mirax Chemical Products Corp., St. Louis, was awarded the contract at 17c. On 1,000 cans scouring powder Marjo Products Co., Chicago, was awarded the contract at 5.5c can. On 3,999 lbs. soap powder Swift & Co., San Antonio, was awarded the contract at 3.34c.

Fort Mason Soap Awards

On a quantity of soap chips, Pioneer Soap Co., San Francisco, was awarded a contract at 7.08c in a recent opening by the U. S. Army Quartermaster at Fort Mason, Calif.

Veterans Administration Bids

Crystal Soap & Chemical Co., Philadelphia, was low bidder on two lots of green soap, 1,500 lbs. and 5,000 lbs., in a recent opening by the Procurement Division of the Veterans Administration at Washington. Bids were $153.30 and $517. On 2,500 gals. saponified solution of cresol, R. M. Hollingshead Corp., Camden, N. J., was low bidder with a quotation of $2,482.50. On an additional 1,500 gals., Merck & Co., Rahway, N. J., entered the low bid of $1,425.

Award Grit Soap Contracts

Day & Frick, Philadelphia, has been awarded contracts on two lots of grit soap, 8,300 cakes at 3.3c and 7,600 cakes at 2.7c, in a recent opening by the U. S. Army Quartermaster at Fort Sam Houston. On 227,760 lbs. laundry soap Armour & Co., San Antonio, was awarded the contract at 3.72c.

Award Naphthalene Contracts

Reilly Tar & Chemical Co., Chicago, has been awarded a contract on 540 lbs. naphthalene at a price of 8.65, a contract on 600 lbs. at 8.85c, and a contract on 100 lbs. at 9.18c in a recent opening by the U. S. Army Quartermaster at Fort Sam Houston.

Fort Mason Soap Awards

Colgate - Palmolive - Peet Co., Berkeley, Calif., was recently awarded a contract on a quantity of laundry soap for delivery to Fort Mason quartermaster, California, at 3.14c. On a quantity of grit soap, Conray Products Co., New York, was awarded the contract at 2.89c.

Caustic Soda Bids Opened

Tex-ite Products Corp., Brooklyn, was recommended for the contract on 50,016 cans caustic soda at 4.52c, in a recent opening by the U. S. Marines Corps Quartermaster at Philadelphia.

Fort Mason Award

On a quantity of flake naphthalene, L. H. Butcher Co., San Francisco, was awarded a contract at 8½c in a recent opening by the quartermaster at Fort Mason, Calif.

Brooklyn Soap Awards

Kirkman & Son, Brooklyn, have been awarded a contract on 775,000 cakes toilet soap at 2.71c in a recent opening by the Brooklyn U. S. Army Quartermaster. On 10,000 lbs. saddle soap R. M. Hollingshead Corp., Camden, N. J., was awarded the contract at 9.8c. On 125,000 lbs. naphthalene flakes Harshaw Chemical Co., Philadelphia, was awarded the contract at 6.19c.

Fort Sam Houston Awards

Gordon-Allen, Oakland, Calif., was awarded a contract on 10,000 cakes toilet soap at 2.81c in a recent opening by the U. S. Army Quartermaster at Fort Sam Houston. On 6,300 lbs. naphthalene H. H. Rosenthal Co., New York, was awarded the contract at 8.49c.

West Point Wax Awards

R. M. Hollingshead Corp., Camden, N. J., was awarded a contract on 2 drums floor wax at 69c per gallon in a recent opening by the West Point Military Academy Quartermaster at West Point.

Marine Corps Polish Awards

Baltimore Paint & Color Works, Baltimore, was awarded a contract on 288 quarts furniture polish at 13.25c a quart in a recent opening by the U. S. Marine Corps Quartermaster at Quantico, Va.

Collusive Government Bids

Government purchasing officers are "fully justified" in rejecting identical bids on government contracts where the bids appear to be the result of collusion and of a combination in restraint of trade. Such is the substance of a recent ruling by the Attorney General of the United States. The ruling resulted from a situation in which fourteen different companies in one industry submitted identical prices to the penny in bidding on 114 items of a government proposal. In only 15 other items was there any difference in price, and one company was responsible for 13 of those differences. There were no other bidders outside the 14 "collusive" companies.

Chemists Hear pH Talk

Members of the American Association of Textile Chemists and Colorists, New York section, heard G. A. Perley, Leeds & Northrup Co., read a paper on "Modern Methods of pH Measurement," at the November meeting, Nov. 19, at the Chemists' Club, New York.

Irish Authorize Soap Imports

The Irish Free State has authorized the importation of 1,400 cwt. of soap and soap powders between Dec. 1, 1937 and May 31, 1938.

John Knight Ltd., London, has launched a national campaign in England advertising "Trixie" soapless shampoo.

IN this select group is at least ONE perfume that will lend added appeal to your product. Choose your fragrance and request us for free sample.

TYPE of ODOR:

ALMOND
•
CEDAR
•
VIOLET
•
LILAC
•
LILY
•
CLOVE
•
LAVENDER
•
ORIENTAL
•
CORYLIPSIS
•
HONEY
•
SYRINGA
•
ROSE
•
ORANGE BLOSSOM
•
HONEYSUCKLE
•
JASMINE
•
WISTARIA

WAR DECLARED on Bugville! Perfume and insecticide manufacturers prepare strong offensive! Housewives mobilize! Insect pests are doomed!

Yes, it looks like bad times for Bugville. Better materials and more appealing perfumes are expected to animate fly spray and insecticide sales this season as never before. Housewives who formerly loathed their use because of objectionable after-effects will welcome the pleasant new odors soon to be discovered in these improved products. And here's a tip for the readers of "Soap": The list in the accompanying column includes the perfumes from which many of these products will derive their improvement. All sixteen of them are carefully blended compounds perfected in our laboratory for just this purpose—to give complete and lasting coverage of the insecticide base and to impart a more appealing odor effect at a competitively attractive price.

Your request for free test samples of one or two of these specialties may prove to be the step that will enable you to offer a more marketable product during the insect season of 1938. Write for your sample today.

"Fragrance Creates Sales Appeal"

FRITZSCHE Brothers, inc.

816 WEST 8TH STREET LOS ANGELES, CAL.
Proprietors of PARFUMERIES de SEILLANS Seillans, France
FRITZSCHE BROTHERS, of Canada, Ltd., 77-79 Jarvis St., Toronto, Canada

PORT AUTHORITY COMMERCE BLDG.
76 NINTH AVENUE, NEW YORK, N. Y.
118 WEST OHIO ST CHICAGO, ILL

A *Fritzsche* PRODUCT for EVERY PURPOSE . . .

- **ESSENTIAL OILS**

  These basic materials are, as they should be, the finest that modern methods and scientific skill can produce—oils of the very highest purity and dependability.

- **AROMATIC CHEMICALS**

  Each item in this group represents a degree of purity and quality that assures finer aromatic effects **plus** the advantage of material economy.

- **FIXATIVES**

  We urge manufacturers to consult us in the selection of their fixatives. With many to choose from, there is always that one which will produce better results in a given case. Let us assist you in your choice.

- **BATH SALT PERFUMES**

  Combining perfume and color, our delightful Bath Perstels greatly simplify and facilitate the process of manufacture. Very economical. Send for details and complete list of blends.

- **DENTAL AND ORAL FLAVORS**

  The flavors in this group are of a special character, carefully blended to impart pleasant, clean, refreshing taste effects. Consult us for these or for the creation of exclusive flavor blends.

- **DEODORIZING COMPOUNDS**

  The use of **good** deodorizing compounds in technical products such as para blocks, naphthalene, cleansers, waxes, polishes, solvents, diluents, etc., is one of the best investments a manufacturer can make. For effective low cost coverage we offer Neutroleum, Safrella, Javellal, Methalate "C", and others.

- **INSECTICIDES AND DISINFECTANTS**

  Note our advertisement on opposite page,—then investigate our improved line of odors. Each item in this group embodies the latest advances in scientific perfuming.

- **TOILET SOAP COMPOUNDS**

  A large group of perfumes especially prepared to meet the exacting requirements of soap manufacture. Exquisite scents at minimum cost. Send for particulars.

- **LIQUID SOAP AND SHAMPOO PERFUMES**

  These perfumes are highly soluble and mix readily with liquid soaps. Quantity required governed by cost limits and strength of odor desired.

- **SOAP COLORS**

  We can supply soap colors to produce any desired tint. For specific recommendations, send us description or sample of color to be matched.

- **ANTI-OXIDANTS**

  Highly important to the soap manufacturer are our newly developed preservatives for soaps, animal and vegetable fats and oils. Write us for details concerning OXIDEX.

SEND FOR SAMPLES

Inedible Fat Group Meets

Exception to the wages and hours bills was taken by the American Association of Producers of Domestic Inedible Fats at its annual meeting at the Hotel New Yorker, New York, Nov. 15th and 16th. The association went on record in opposition to the measure in so far as the limitation on hours is concerned with the stipulation that time and a half be paid for overtime. It was pointed out that strict limitation of hours is economically indefensible in an industry such as the inedible fat production, which deals with perishable raw materials.

The association also is anxious to have a new definition adopted to determine what is American whale oil and free of duty. They are anxious to get an amendment to the present tax law or a ruling that would reverse the one now in effect. At present, they point out, large ships of American registry employ killer boats that are foreign and oil from such operations is tax free on entry into the United States.

Plan Anti-Freeze Campaign

National Carbon Co., New York, has planned an advertising campaign in behalf of "Eveready Prestone," automobile radiator antifreeze, to be launched during zero and sub-zero weather conditions this coming winter.

Pinaud Executive in U. S.

Jacques Heilbronn, an executive director of the American and French branches of Pinaud, Inc., cosmetic firm, recently arrived in the United States to supervise the company's 1938 advertising plans. He will also discuss the introduction of a new line of perfume to the American market.

Duart Increases Advertising

Duart Sales Co., Ltd., San Francisco, has completed arrangements to launch the largest national advertising program in its history for the Duart cosmetic products, according to William H. H. Davis, vice-president.

OIL BERGAMOT Artificial NORDA

AN artificial BERGAMOT which meets the most exacting requirements . . . in view of the present high price of the natural oil, BERGAMOT ARTIFICIAL NORDA offers a material saving in perfuming cost without sacrifice of quality . . . suitable for use in odors for fine toilet soaps, or other places where natural BERGAMOT is called for.

Ask NORDA for further details.

Norda

ESSENTIAL OIL and CHEMICAL COMPANY

Chicago Office
325 W. Huron St.

Los Angeles Office
685 Antonia Ave.

St. Paul Office
Pine and E. 3rd St.

Canadian Office
119 Adelaide St., W., Toronto

New York Office
601 West 26th St.

Southern Office
Candler Annex Bldg., Atlanta, Ga.

New Trade Marks

The following trade-marks were published in the November issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

SILVER DUST—This in solid letters on carton describing soap. Filed by Hecker Products Corp., New York, May 27, 1937. Claims use since Mar. 3, 1937.

MARINE—This in solid letters describing soap powder. Filed by Central Soap Co., St. Paul, Sept. 1, 1937. Claims use since 1902.

OZOGERMO—This in solid letters describing germicide and disinfectant. Filed by Laboratories Lorbis, Montreal, Quebec, Canada, Apr. 27, 1937. Claims use since Aug. 14, 1936.

ARBOROL—This in solid letters describing insecticides, fungicides, germicides. Filed by California Spray-Chemical Corp., Richmond, Calif., Aug. 23, 1937. Claims use since Feb. 19, 1937.

BOTANO—This in solid letters describing insecticides, fungicides, germicides. Filed by California Spray-Chemical Corp., Richmond, Calif., Aug. 23, 1937. Claims use since Feb. 5, 1937.

GREENOL—This in solid letters describing insecticides, fungicides, germicides. Filed by California Spray-Chemical Corp., Richmond, Calif., Aug. 23, 1937. Claims use since Nov. 11, 1936.

PENTOX—This in solid letters describing herbicides, insecticides. Filed by California Spray-Chemical Corp., Richmond, Calif., Aug. 23, 1937. Claims use since May 14, 1936.

POMOL—This in solid letters describing insecticides, fungicides, germicides. Filed by California Spray-Chemical Corp., Richmond, Calif., Aug. 23, 1937. Claims use since Apr. 20, 1937.

TRIOX—This in solid letters describing herbicides, insecticides. Filed by California Spray-Chemical Corp., Richmond, Calif., Aug. 23, 1937. Claims use since Feb. 5, 1937.

L'ADORE—This in shaded letters describing toilet soap. Filed by Sears, Roebuck and Co., Chicago, Aug. 16, 1937. Claims use since June 29, 1937.

MOTH GAS—This in bubble letters encircled, describing insecticide. Filed by Lewy Chemical Co., New York, June 23, 1936. Claims use since Nov. 8, 1927 for entire mark; since October 1894 for words "Moth Gas."

MOTH GAS LIQUID FROST—This in solid letters describing insecticide. Filed by Lewy Chemical Co., New York, June 23, 1937. Claims use since Jan. 15, 1931 for entire mark; since October, 1894, for words "Moth Gas."

MOTH GAS HAIL—This in solid letters describing insecticide. Filed by Lewy Chemical Co., New York, June 23, 1936. Claims use since Nov. 8, 1937 for entire mark; since October, 1894, for words "Moth Gas."

X-ZIL—This in solid letters describing antiseptic. Filed by Robert A. Wangeman for Hamilton Chemical Co., Sheboygan, Wis., Oct. 26, 1936. Claims use since August, 1936.

RIDZ—This in outline letters describing insecticide and deodorant. Filed by Midway Chemical Co., Chicago, Feb. 15, 1937. Claims use since Jan. 22, 1937.

KRYSTOX—This in solid letters, reading diagonally, describing liquid for treatment of athlete's foot. Filed by Crystex Laboratories, Inc., Charlton, Iowa, May 24, 1937. Claims use since April, 1937.

ZYLOXIN—This in solid letters describing antiseptic. Filed by Norwich Pharmacal Co., Norwich, N. Y., Aug. 14, 1937. Claims use since May 13, 1937.

D. H. S. ACTIVATOR—The word "Activator" is disclaimed apart from the mark. In solid letters describing insecticide. Filed by Hercules Powder Co., Wilmington, July 16, 1937. Claims use since Dec. 3, 1936.

VITA WHITE—The word "White" is disclaimed apart from the mark. In shaded outline letters describing antiseptic and germicide. Filed by New Products Corp., Indianapolis, Aug. 20, 1937. Claims use since May 6, 1937.

LARVEX—This in solid letters describing insecticide. Filed by Zonite Products Corp., New York, Aug. 21, 1937. Claims use since Aug. 2, 1922.

RE-VI-VO—This in solid letters describing cleaner. Filed by Re-Vi-Vo Products, Chicago, May 17, 1937. Claims use since May 8, 1937.

MIRRORWAX—This in solid letters describing auto and furniture polish. Filed by Mirrorwax Co., Danvers, Mass., July 17, 1937. Claims use since March, 1937.

SLICK—This in solid script describing household cleaner. Filed by Emsee Mfg. Co., Monroe, Mich., June 7, 1937. Claims use since May 1, 1936.

BLU-FAX—This in solid letters describing abrasive and detergent. Filed by Turco Products, Inc., Los Angeles, Aug. 2, 1937. Claims use since Jan. 1, 1935.

CHEVRON—This in solid letters describing cleaner. Filed by Standard Oil Co. of California, San Francisco, Aug. 23, 1937. Claims use since May 23, 1936.

WAR ON ROACHES—This in solid letters describing roach powder. Filed by Kraus Chemical Works, Brooklyn, May 22, 1937. Claims use since 1917.

VEG-O-CIDE—This in solid letters describing insecticide. Filed by Soy Bean Processing Co., Waterloo, Iowa, July 21, 1937. Claims use since June 9, 1937.

WING A WAY—This in solid letters describing insecticide and insectifuge. Filed by Kilgore Development Corp., Washington, Aug. 30,

ABC

CRESYLIC ACID AROMATICS

PHENYL ETHYL ALCOHOL
GERANIOL
CITRONELLOL
ACETOPHENONE
BENZYL ACETATE
BENZYL ALCOHOL
BENZOPHENONE
AMYL CINNAMICALDEHYDE

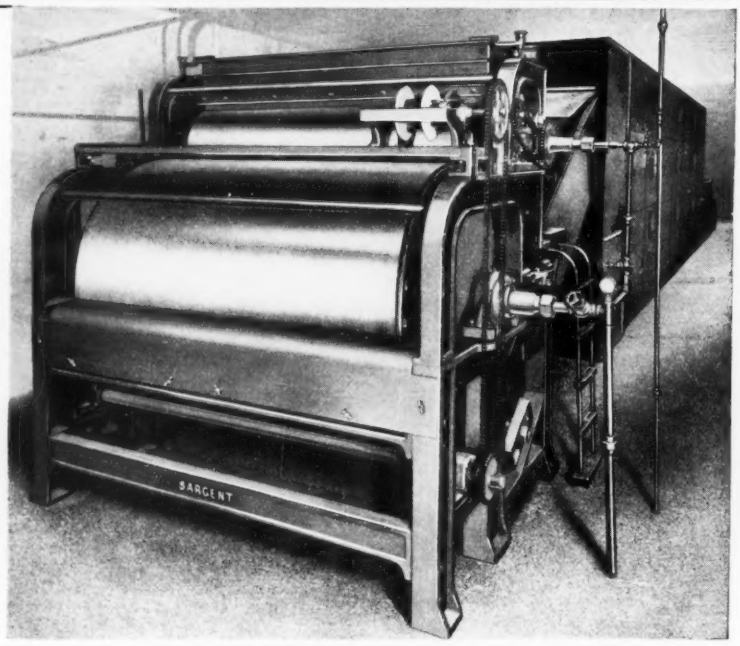
For Soaps, Perfumes, Cosmetics, etc.

AMERICAN-BRITISH CHEMICAL SUPPLIES, Inc.
180 MADISON AVE., NEW YORK, N.Y.

ASSOCIATED COMPANIES
KAY-FRIES CHEMICALS, INC. NEW YORK, N. Y.
CHARLES TENNANT & CO. (CANADA) LTD TORONTO, CANADA

New!..

a Soap Chilling Roll and Drying Machine



AS the title indicates, the Rolls are NEW and the entire machine is NEW, many valuable improvements having been perfected until this latest Sargent development is now one of the very finest Rolls obtainable.

To the soap manufacturer, the most important angle is to have a *thin, uniform chip* . . . readily accomplished by these new Rolls being expertly machined, ground and set. Finest grade of cast iron. Vari-speed controls on both Rolls insures easy adjustment . . . every part accessible. Drive improvements reduce the horsepower used. Changes made at a minute's notice. The Dryer is entirely re-designed. Its housing gives better insulation and cuts down steam consumption per hour. Other valuable changes have been made in the circulating and exhaust air systems . . . and all *fans* are *direct motor driven.*

C. G. SARGENT'S SONS CORP. GRANITEVILLE MASS., U. S. A.

1937. Claims use since Aug. 26, 1937.

IT-FLOPS—This in solid letters describing insecticide. Filed by It-Flops Mfg. Co., Brooklyn, Aug. 25, 1937. Claims use since Aug. 25, 1937.

Design for package for polish showing heads of Dutch boy and girl superimposed on a geometric design. Filed by Old Dutch Process Mfg. Co., Brooklyn. July 18, 1936. Claims use since Jan. 1936.

ESSO—This in solid letters in oval, describing floor dressing. Filed by Standard Oil Co., of N. J., Sept. 1, 1937. Claims use since June 29, 1937.

ENERGY—This in solid letters describing soap. Filed by National Retailer-Owned Grocers, Inc., Chicago, Dec. 11, 1936. Claims use since Oct. 13, 1936.

DISAPPEARO — This in solid letters describing cleaning compound. Filed by Fry Bros. Co., Cincinnati, May 26, 1937. Claims use since Apr. 2, 1937.

FAMILEX—This in solid letters describing shaving soap. Filed by Familex Products Co., Montreal, Quebec, Canada, May 24, 1937. Claims use since July 1, 1928.

ADSAL—This in solid letters describing cleaning compound. Filed by H. Kirk White and Co., Oconomowoc, Wis., July 31, 1937. Claims use since April 30, 1937.

"RAY-O-LITE"—This in solid letters describing household cleaner. Filed by Percy McNeill Garrod, Port Richmond, Staten Island, N. Y., Sept. 3, 1937. Claims use since June, 1936.

BEAU-KNOT—This in solid letters describing soap. Filed by Wm. T. Knott Co., New York. Sept. 4, 1937. Claims use since October, 1931.

REEFER-GALLER—This in solid letters encircled, describing insecticide. Filed by Reefer-Galler, New York. Oct. 23, 1936. Claims use since Feb. 4, 1936.

Toc's—This in solid letters within rectangle, describing disinfectant. Filed by Toc's Products Co., Syracuse, N. Y., April 14, 1937. Claims use since Jan. 1, 1934.

KUMFO—This in solid letters describing antiseptic. Filed by Albert Minks, Elmwood Place, Ohio, Sept. 15, 1937. Claims use since Aug. 25, 1937.

INTRAFIL—This in solid letters describing water softener and bleach. Filed by Purex Corp., Ltd., South Gate, Calif., Sept. 18, 1937. Claims use since Sept. 7, 1937.

MUSKEETUM MAKES-EM-SCRAM —This on rectangular reverse plate, describing insecticide. Words "Makes-Em-Scram" are disclaimed apart from the mark. Filed by Harold A. E. Wenger, Regnew Laboratories, Madison, Wis., Sept. 21, 1937. Claims use since March 12, 1936.

Trade Marks Granted

351,046. Insecticides, Disinfectants. Alfagold Co., Dubuque, Iowa. Filed May 15, 1936. Serial No. 378,490. Published July 27, 1937. Class 6.

351,058. Insecticides. Boll-We-Ex, Inc., Memphis, Tenn. Filed October 10, 1936. Serial No. 384,191. Published August 3, 1937. Class 6.

351,072. Antiseptic and Disinfectant. United States Drug & Chemical Corp., Malden, Mass. Filed February 12, 1937. Serial No. 388,860. Published August 3, 1937. Class 6.

351,117. Disinfectant and Antiseptic. Socony-Vacuum Oil Co., New York. Filed May 14, 1937. Serial No. 392,777. Published July 27, 1937. Class 6.

351,123. Insecticides. X-Termo Products, Chicago. Filed May 17, 1937. Serial No. 392,872. Published August 3, 1937. Class 6.

351,124. Toothpaste. Cummer Products Co., Bedford, Ohio. Filed May 18, 1937. Serial No. 392,915. Published August 3, 1937. Class 6.

351,139. Antiseptic. Charles W. Boettcher, Amoret, Mo. Filed May 21, 1937. Serial No. 393,059. Published August 3, 1937. Class 6.

351,140. Fungicide. Dye-Col Products, New York. Filed May 21, 1937. Serial No. 393,069. Published August 3, 1937. Class 6.

351,177. Shaving Soap. Pinaud Inc., New York. Filed June 7, 1937. Serial No. 393,779. Published August 10, 1937. Class 4.

351,179. Soap. Pinaud Inc., New York. Filed June 7, 1937. Serial No. 393,781. Published August 10, 1937. Class 4.

351,180. Soap. Pinaud Inc., New York. Filed June 7, 1937. Serial No. 393,782. Published August 10, 1937. Class 4.

351,248. Washing and Cleaning Preparation. General Chemical Co., Worcester, Mass. Filed February 4, 1936. Serial No. 374,497. Published August 17, 1937. Class 4.

351,269. Compound for Cleaning Automobile Bodies. Puritan Soap Co., Rochester, N. Y. Filed January 18, 1937. Serial No. 387,921. Published August 17, 1937. Class 4.

351,270. Compound for Cleaning Automobile Bodies. Puritan Soap Co., Rochester, N. Y. Filed January 18, 1937. Serial No. 387,923. Published August 17, 1937. Class 4.

351,340. Auto Wax. L. J. Sauerborn, Milwaukee. Filed May 26, 1937. Serial No. 393,356. Published August 17, 1937. Class 16.

351,373. Polish for Automobile Bodies. Black & Decker Manufacturing Co., Towson, Md. Filed June 16, 1937. Serial No. 394,140. Published August 3, 1937. Class 16.

351,386. Detergent. Colgate-Palmolive-Peet Co., Jersey City, N. J. Filed June 23, 1937. Serial No. 394,399. Publishd August 17, 1937. Class 4.

351,387. Detergent. Colgate-Palmolive-Peet Co., Jersey City, N. J. Filed June 23, 1937. Serial No. 394,400. Published August 17, 1937. Class 4.

351,401. Soap. Pinaud Inc., New York. Filed June 28, 1937. Serial No. 394,630. Published August 17, 1937. Class 4.

351,453. Wax and Polish for Automobiles, Furniture, Woodwork. H. G. Valentine Co., Randolph, Mass. Filed June 8, 1936. Serial No. 379,456. Published August 24, 1937. Class 16.

ISCO
WAXES and GUMS

OUR OWN PRODUCTION • —JERSEY CITY PLANT.

Modern equipment and careful control at each step assure highest possible purity.

WAXES—

- Pure Refined Carnauba — Flake and Lump
- Refined Candelilla — Flake and Lump
- Beeswax — Pure Yellow Refined Pure White Sunbleached
- Ceresine — Japan and Montan Waxes
- Refined J. C. 268 Wax—Especially for manufacturers of Wax emulsions. Substitutes for higher priced Carnauba. Gives a good, light color emulsion. Dries with good sheen. Polishes to high lustre. Flake and Lump form. Working sample and price on request.

GUMS—

- Water Soluble — Karaya — Tragacanth — Arabic — Locust Bean

CAUSTIC SODA

- Our own manufacture. Flake, Crystal, Solid, Liquid — Various Packages.

CAUSTIC POTASH

- Flake, Solid, Granular, Broken, Walnut, Liquid — Various Packages.

CARBONATE OF POTASH

- Domestic — Calcined 96-98% — Calcined Dustless 99-100% — Liquid 47-48% — Hydrated 83-85%.

SILVER TALC — STEARIC ACID — LANOLIN
ZINC OXIDE — AQUAPHIL

Samples, prices and further information promptly on request.

INNIS, SPEIDEN & Co.
Manufacturers and Importers
117 Liberty Street New York
BOSTON · PHILADELPHIA · CLEVELAND · CHICAGO
GLOVERSVILLE, N. Y.
FACTORIES: JERSEY CITY, N. J., NIAGARA FALLS, N. Y.

Your Weight Control Problem Solved with HYDRO-TITE Cartons

They Keep Inside Moisture IN and Outside Moisture OUT

Profits result from building goodwill. And you secure goodwill when you use a carton that keeps your soap at its proper weight.

A HYDRO-TITE carton can be made virtually weather-proof. Its resistance to the passage of air through the package walls tends to keep the amount of moisture constant. It is extremely sturdy, either as a printed carton complete in itself, or as a shell used in conjunction with label wraps. HYDRO-TITE is economical to use for the most competitive items.

Thousands of HYDRO-TITE cartons are in daily use. Write today for test samples.

Sales Offices in Principal Cities

THE GARDNER-RICHARDSON COMPANY
Middletown, Ohio

Manufacturers of Folding Cartons and Boxboard

PROTECT SOAP PRODUCTS IN HYDRO-TITE Cartons
Trade Mark Reg. U. S. Pat. Off.

Raw Material Markets

(As of November 29, 1937)

NEW YORK — The approach of the year-end and the necessity of realigning price levels for 1938 contracts brought a whole series of changes in the market for soap and sanitary products raw materials this period. Oils and fats continued to decline, with many items in the list reaching the lowest levels of the year. A number of important price changes were noted in the chemical list, chief of these being the three cent decline in the price of paradichlorbenzene. This reduction was made by producers in an effort to widen present channels of distribution. Rosin prices were also sharply lower this period, with the collapse in other commodity prices contributing to the declining tendency. Glycerin prices were also off moderately in the slow movement back from the recent highs.

OILS AND FATS

Coconut Oil

Both copra and coconut oil dropped lower in price this period in a very weak market. There was little interest on the buying side even at the low level of 4c per lb. for New York tanks of Manila oil.

Cotton Oil

With a heavy crop of cottonseed oil forecast for the current season, there is an assurance of increased supplies of foots for the soap industry. Cotton oil was lower in price this period in company with competing products and the general weakness in commodity markets.

Olive Oil

In spite of the fact that the supply situation in olive oil and olive oil foots is not yet near normal by any means, there was a declining tendency noted in both oils this month, attributable to the general weakness of the whole fat and oil group. Olive oil is quoted currently at $1.20 per gal., with foots at 10c per lb.

Tallow and Grease

Tallow and the greases broke through to the lowest levels of the year this period, as buyers expressed their lack of interest in the market by refusing offers even at substantial concessions from previous quotations. City extra tallow is offered currently at 6¼c. with house and yellow grease priced at 4⅞c to 5c.

PERFUMING MATERIALS

Anise Oil

The spot market was lower, at $1.30 per lb., this period, although there is still a market shortage which will not be relieved until supplies start coming through in normal fashion from China.

Linaloe Oil

One of the few materials to advance in price this period was linaloe oil which is now quoted at $1.30 per lb., an advance of 15c.

Citronellal

Citronellal was reduced to a basis of 75 to 80c per lb. this period in an outbreak of competitive selling. Another of the aromatic chemical group to drop in price this period was diphenyl oxide, which is currently quoted at 60 to 62c per lb., off 10c from a month ago.

MISCELLANEOUS

Paradichlorbenzene

Producers of paradichlorbenzene announced a reduction of three cents per pound this period in quotations on 1938 contracts. This brings the market down to 11c per lb. for car lots and to 12½ to 14½c per lb. for less than car lot quantities. The reduction is belived to have been made to stimulate consumption.

Pyrethrum

As the season progresses, the quality of Japanese flowers is reported by importers to be growing worse and worse, with the pyrethrins content dropping to less and less satisfactory levels. This of course necessitates use of increasing quantities of flowers to bring pyrethrum extracts up to the desired strength and has been responsible for a consequent increase in extract prices.

◆

George Hipp, Oil Broker

George W. Hipp, for ten years in the sales division of Spencer Kellogg & Co., Buffalo, and more recently in the oil and fat brokerage business in Chicago, has opened his own offices in Buffalo as an oil and fat broker and manufacturers' agent. He will specialize in coconut, soybean, corn, and hardened fish oils, tallow and greases, fatty acids and soap stock. His firm will also act as sales agents for manufacturers of chemicals and other products in Western New York State and Northern Pennsylvania. Offices of the new Hipp firm are located at 205 Morgan Building, Buffalo, N. Y.

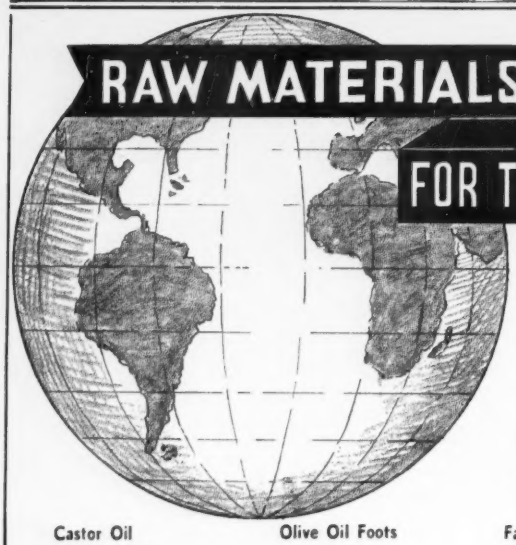
◆

Japan May Bar Alkalis

The Japanese Soda Manufacturers Association has filed a petition demanding prohibition of imports of soda ash and caustic soda into Japan, according to reports received by the U. S. Department of Commerce. The Japanese protest that imports of these commodities have sharply increased. Exports of soda ash from the U. S. to Japan dropped from 1,794,758 pounds in July to 896,000 pounds in September, although exports of caustic soda increased from 1,141,900 pounds in July to 2,688,000 pounds in September.

◆

The U. S. Department of Commerce at Washington reports 115,547,539 lbs. of crude cottonseed oil on hand Oct. 31, 1937, as compared with 123,006,689 lbs. on hand Oct. 31, 1936.



RAW MATERIALS FOR THE SOAP INDUSTRY FROM ALL PARTS OF THE WORLD

OILS FATS
CHEMICALS
FATTY ACIDS

1838—1938

Again this year, as for the past 100 years, we wish our friends a prosperous New Year.

Castor Oil
Cocoanut Oil
Corn Oil
Cottonseed Oil
Palm Oil
Palm Kernel Oil
Olive Oil

Olive Oil Foots
Peanut Oil
Perilla Oil
Rapeseed Oil
Sesame Oil
Soya Bean Oil
Teaseed Oil

Fatty Acids
Lard Oils
Neatsfoot Oil
Oleo Stearine
Stearic Acid
White Olein

Tallow
Grease
Lanolin
Caustic Soda
Soda Ash
Caustic Potash
Carbonate Potash
Sal Soda

Modified Soda
Silicate Soda
Metasilicate
Tri Sodium Phosphate
Di Sodium Phosphate
Chlorphyll
"CEREPS" Superfatting Agent

WELCH, HOLME & CLARK CO., Inc.

563 GREENWICH STREET, NEW YORK CITY

ESTABLISHED 1838

NAPHTHALENE

CRUSHED—FLAKES—CHIPS—BALLS

Quality Plus Service

Arsenic	Soda Ash	Copper Sulphate
Paradichlorbenzene	Trisodium Phosphate	Thallium Sulphate
Caustic Soda	Pyrethrum	Paris Green
Sodium Fluoride	(all forms & Extract)	Carnauba Wax
Methyl Salicylate	Cresylic Acid	Japan Wax
Carbon Tetrachloride	Camphor	Essential Oils

H. H. ROSENTHAL CO., Inc.

25 East 26th Street — New York, N. Y.

Tel.: AShland 4-7500
Cable Address: RODRUG, N. Y.

Raw Material Prices

(As of November 29, 1937)

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C. P., drums	lb.	$ .06	$ .06½
Acid. Boric, bbls., 99½%	ton	95.00	100.00
Cresylic, drums	gal.	.89	.93
Low boiling grade	gal.	.92	.96
Oxalic, bbls.	lb.	.11½	.12¼
Adeps Lanae, hydrous, bbls.	lb.	.16	.18
Anhydrous, bbls.	lb.	.17	.19
Alcohol, Ethyl, U. S. P., bbls.	gal.	4.14	4.19
Complete Denat., SD 1, drums, ex.	gal.	.32	.37
Alum. Potash lump	lb.	.03½	.03¾
Ammonia Water, 26°, drums	lb.	.02¼	.02½
Ammonium Carbonate, tech., bbls	lb.	.08	.12½
Bentonite 1	ton	—	16.00
Bentonite 2	ton	—	11.00
Bleaching Powder, drums	100 lb.	2.25	2.60
Borax, pd., cryst., bbls., kegs	ton	47.00	67.00
Carbon Tetrachloride, car lots	lb.	—	.05¼
L. C. L.	lb.	.07	.08
Caustic, see Soda Caustic, Potash Caustic			
China Clay, filler	ton	10.00	25.00
Cresol, U. S. P., drums	lb.	.12	.12½
Creosote Oil	gal.	.13½	.14
Feldspar (200 to 325 mesh)	ton	14.00	15.00
Formaldehyde, bbls.	lb.	.05¾	.06¼
Fullers Earth	ton	15.00	24.00
Glycerine, C. P., drums	lb.	—	.19½
Dynamite, drums	lb.	—	.19½
Saponification, drums	lb.	.14½	.15
Soap, lye, drums	lb.	.13	.13½
Hexalin, drums	lb.	—	.30
Kieselguhr, bags	ton	—	35.00
Lanolin, see Adeps Lanae.			
Lime, live, bbls.	per bbl.	1.70	2.20
Mercury Bichloride, kegs	lb.	.71	.76
Naphthalene, ref. flakes, bbls.	lb.	.07¼	.07½
Nitrobenzene (Myrbane) drums	lb.	.09	.11
Paradichlorbenzene, bbls., kegs	lb.	.12½	.14½
Petrolatum, bbls. (as to color)	lb.	.02	.07¼
Phenol. (Carbolic Acid), drums	lb.	.13¼	.14¼
Pine Oil, bbls.	gal.	.70	.85
Potash, Caustic, drums	lb.	.06¼	.06½
Flake	lb.	.07	.07¼
Potassium Carbonate, solid	lb.	.07¼	.09½
Liquid	lb.	.03½	.03¾
Pumice Stone, powder	100 lb.	3.00	4.00
Rosins (600 lb. bbls. gross for net)—			
Grade B to H, basis 280 lbs.	bbl.	6.40	6.90
Grade K to N	bbl.	6.95	7.10
Grade WG and X	bbl.	7.65	8.00
Wood FF Spot	bbl.	6.70	7.65
Rotten Stone, pwd. bbls.	lb.	.02½	.04½
Silica	ton	20.00	27.00
Soap, Mottled	lb.	.04⅛	.04⅜
Olive Castile, bars	lb.	.26	.35
Olive Castile, powder	lb.	.28	.38
Powdered White, Neutral	lb.	.19½	.21½
Olive Oil Foot, bars, 68-70%	lb.	.09	.09½
Green, U. S. P.	lb.	.08	.09½
Tallow Chips, 88%	lb.	.09	.09½
Soda Ash, cont., wks., bags, bbls.	100 lb.	1.08	1.35
Car lots, in bulk	100 lb.	—	.90
Soda Caustic, cont., wks., solid	100 lb.	—	2.30
Flake	100 lb.	—	2.70
Liquid, tanks	100 lb.	—	1.95
Soda Sal., bbls.	100 lb.	$1.10	$1.30
Sodium Chloride (Salt)	ton	11.40	14.00
Sodium Fluoride, bbls.	lb.	.07¼	.08¾
Sodium Hydrosulphite, bbls.	lb.	.19	.20
Sodium Silicate, 40 deg., drum	100 lb.	.80	1.20
Drums, 52 deg. wks.	100 lb.	1.35	1.75
Tar Acid Oils, 15-25%	gal.	.22½	.30½
Triethanolamine	lb.	.20	.25
Trisodium Phosphate, bags, bbls.	lb.	.03	.03½
Zinc Oxide, lead free	lb.	.06	.06¼
Zinc Stearate, bbls.	lb.	.20	.22

Oils — Fats — Greases

Babassu, tanks, futures	lb.	.07¼	.07½
Castor, No. 1, bbls.	lb.	.10¾	.11½
No. 3, bbls.	lb.	.10¼	.11
Coconut (without excise tax)			
Manila, tanks, N. Y.	lb.	.04	—
Tanks, Pacific coast, futures	lb.	.03⅞	—
Cod, Newfoundland, bbls.	gal.	.52	Nom.
Copra, bulk, coast	lb.	.0230	.0235
Corn, tanks, mills	lb.	.06½	Nom.
Cottonseed, crude, tanks, mill	lb.	—	.05¾
PSY, futures	lb.	—	.07
Fatty Acids	lb.	.07	.08
Degras, Amer., bbls.	lb.	.08	.08¼
English, bbls.	lb.	.08	.08¼
Neutral, bbls.	lb.	.11	.15
Greases, choice white bbls., fob Chicago	lb.	.06¾	.07⅜
Yellow	lb.	.04⅞	.05
House	lb.	.04⅞	.05
Lard, City	lb.	.09¾	.10
Compound tierces	lb.	.10¼	.10½
Lard Oil.			
Extra, bbls.	lb.	—	.11¼
Extra, No. 1, bbls.	lb.	—	.09¼
No. 2, bbls.	lb.	—	.08½
Linseed, raw, bbls.	lb.	.1040	.1080
Tanks, raw	lb.	—	.0980
Boiled, 5 bbl. lots	lb.	.1160	.1180
Menhaden, crude, tanks, Balt.	gal.	.34	Nom.
Oiticica Oil, tanks	lb.	.14	Nom.
Oleo Oil, No. 1, bbls., N. Y.	lb.	—	.12½
No. 2, bbls., N. Y.	lb.	—	.12
Olive, denatured, bbls., N. Y.	gal.	1.20	Nom.
Foots, bbls., N. Y.	lb.	.09¾	.10
Palm, shipment	lb.	.03⅝	Nom.
Palm Kernel, shipment	lb.	.04½	Nom.
Peanut, domestic, tanks	lb.	.06⅞	Nom.
Rapeseed Oil, denat.	gal.	.91	.92
Red Oil, distilled, bbls.	lb.	.09⅝	.10⅝
Saponified, bbls.	lb.	.09⅝	.10⅝
Tanks	lb.	.08¾	.09¾
Sesame Oil, dms.	lb.	.10½	Nom.
Soya Bean, domestic tanks, saponified, f.o.b. West	lb.	——	.08
Stearic Acid.			
Double pressed	lb.	.11	.12
Triple pressed, bgs.	lb.	.13¾	.14¾
Stearine, oleo, bbls.	lb.	.08½	.08¾
Tallow, special, w.o.b. plant	lb.	.05½	.05¾
City, ex. loose, f.o.b. plant	lb.	—	.06¼
Tallow oils, acidless, tanks, N. Y.	lb.	—	.09¼
Bbls., c/1 N. Y.	lb.	—	.09¾
Teaseed Oil, crude	lb.	.09	.09¼
Whale, refined	lb.	.0940	.0960

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SAL AMMONIAC
SALT
SAL SODA
SILICATE OF SODA
SODA ASH
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COTTONSEED OIL
LARD OIL
NEATSFOOT OIL
OLEIC ACID
-RED OIL
OLIVE OIL
OLIVE OIL FOOTS
PALM OIL
PALM KERNEL OIL
PEANUT OIL
RAPESEED OIL
ROSIN
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Almond, Bitter, U.S.P.	lb.	$2.50	$2.75
Bitter, F. F. P. A.	lb.	2.25	2.50
Sweet, cans	lb.	.63	.65
Anise, cans, U. S. P.	lb.	1.30	Nom.
Bay tins		1.35	1.50
Bergamot, coppers	lb.	3.90	4.10
Artificial	lb.	1.25	1.40
Birch Tar, rect. tins	lb.	.70	.75
Crude, tins	lb.	.14	.17
Bois de Rose, Brazilian	lb.	1.25	1.35
Cayenne	lb.	2.75	3.00
Cade, cans	lb.	.48	.52
Cajeput, native, tins	lb.	.66	.72
Calamus, tins	lb.	5.50	5.75
Camphor, Sassy, drums	lb.	.17	.18
White, drums	lb.	.17	.18
Cananga, native, tins	lb.	1.50	1.65
Rectified, tins	lb.	2.15	2.75
Caraway Seed	lb.	2.10	2.25
Cassia, Redistilled, U.S.P.	lb.	1.25	Nom.
Cedar Leaf, tins	lb.	.85	1.10
Cedar Wood, light, drums	lb.	.26	.30
Citronella, Java, drums	lb.	.45	.48
Citronella, Ceylon, drums	lb.	.40	.42
Clove, U. S. P., tins	lb.	1.15	1.17
Eucalyptus, Austl., U.S.P., cans	lb.	.44	.46
Fennel, U. S. P., tins	lb.	1.20	1.30
Geranium, African, cans	lb.	4.00	4.75
Bourbon, tins	lb.	3.75	4.00
Turkish	lb.	2.40	2.60
Hemlock, tins	lb.	1.05	1.10
Lavender, U.S.P., tins	lb.	2.25	5.60
Spike, Spanish, cans	lb.	1.05	1.10
Leman, Ital., U.S.P.	lb.	2.35	2.75
Cal.	lb.	2.50	—
Lemongrass, native, cans	lb.	.42	.43
Linaloe, Mex., cases	lb.	1.30	1.40
Nutmeg, U. S. P., tins	lb.	1.25	1.30
Orange, Sweet, W. Ind., tins	lb.	1.95	2.00
Italian cop	lb.	2.20	2.75
Distilled	lb.	—	.90
Cal.	lb.	2.25	—
Origanum, cans, tech	lb.	.90	1.25
Palmarosa	lb.	2.40	2.60
Patchouli	lb.	5.00	8.00
Pennyroyal, dom.	lb.	1.40	1.45
Imported	lb.	1.40	1.50
Peppermint, nat, cans	lb.	2.25	2.50
Redis., U.S.P., cans	lb.	2.50	2.75
Petitgrain, S. A., tins	lb.	1.10	1.20
Pine Needle, Siberian	lb.	1.02	1.05
Rose, Natural	oz.	5.25	22.50
Artificial	oz.	2.00	3.00
Rosemary, Spanish, tins	lb.	.56	.75
drums	lb.	.51	Nom.
Sandalwood, E. Ind., U.S.P.	lb.	5.25	5.50
Sassafras, U. S. P.	lb.	.90	1.05
Artificial, drums	lb.	.34	.35
Spearmint, U.S.P.	lb.	1.75	1.80
Thyme, red, U.S.P.	lb.	.75	1.25
White, U.S.P.	lb.	.85	1.35
Vetivert, Bourbon	lb.	8.00	18.00
Ylang Ylang, Bourbon	lb.	3.50	6.00

Aromatic Chemicals

Acetophenone, C. P.	lb.	$1.25	$2.25
Amyl Cinnamic Aldehyde	lb.	2.00	2.25
Anethol	lb.	1.30	1.35
Benzaldehyde, tech.	lb.	.60	.65
U. S. P.	lb.	1.20	1.30
Benzyl, Acetate	lb.	.55	1.00
Alcohol	lb.	.65	1.15
Citral	lb.	1.70	3.15
Citronellal	lb.	.75	.80
Citronellol	lb.	1.90	2.15
Citronellyl Acetate	lb.	4.50	7.00
Coumarin	lb.	3.10	3.30
Cymene, drums	gal.	.90	1.25
Diphenyl oxide	lb.	.60	.62
Eucalyptol, U. S. P.	lb.	.58	.60
Eugenol, U. S. P.	lb.	2.00	2.50
Geraniol, Domestic	lb.	.75	2.00
Imported	lb.	2.00	3.00
Geranyl Acetate	lb.	2.00	2.50
Heliotropin	lb.	2.00	2.10
Hydroxycitronellal	lb.	3.50	9.00
Indol, C. P.	oz.	2.00	2.50
Ionone	lb.	3.25	5.50
Iso-Eugenol	lb.	3.00	4.25
Linalool	lb.	1.65	2.25
Linalyl Acetate	lb.	1.70	2.55
Menthol	lb.	3.50	3.60
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.10	2.75
Paracresol	lb.	4.50	6.00
Salicylate, U. S. P.	lb.	.40	.45
Musk Ambrette	lb.	4.20	5.00
Ketone	lb.	4.35	5.25
Xylene	lb.	1.25	2.00
Phenylacetaldehyde	lb.	4.80	8.00
Phenylacetic Acid, 1 lb., bot.	lb.	2.50	3.25
Phenylethyl Alcohol, 1 lb. bot.	lb.	4.00	4.50
Rhodinol	lb.	5.75	8.00
Safrol	lb.	.47	.50
Terpineol, C. P., 1,000 lb. drs.	lb.	.23	.25
Cans	lb.	.27	.30
Terpinyl Acetate, 25 lb. cans	lb.	.80	1.00
Thymol, U. S. P.	lb.	1.70	1.95
Vanillin, U. S. P.	lb.	3.10	3.80
Yara Yara	lb.	1.30	2.00

Insecticide Materials

Insect Powder, bbls.	lb.	.20	.24
Concentrated Extract			
5 to 1	gal.	1.40	1.45
20 to 1	gal.	5.15	5.25
30 to 1	gal.	7.60	7.75
Derris, powder—4%	lb.	.33	.38
Derris, powder—5%	lb.	.39	.44
Cube, powder—4%	lb.	.23	.28
Cube, powder—5%	lb.	.28	.33

Gums

Arabic, Ahm. Sts.	lb.	.11¾	.12
White, powdered	lb.	.15	.16
Karaya, powdered No. 1	lb.	.12	.13
Tragacanth, Aleppo, No. 1	lb.	2.75	3.00
Flake	lb.	.50	1.00

Waxes

Bees, white	lb.	.39	.42
African, bgs.	lb.	.26	.26½
Refined, yel.	lb.	.35	.39
Candelilla, bgs.	lb.	.14	.15
Carnauba, No. 1	lb.	.44	.45
No. 2, N. C.	lb.	.39	.40
No. 3, chalky	lb.	.35	.36
Ceresin, yellow	lb.	.08½	.11
Paraffin ref. 125-130	lb.	.0455	.04¾

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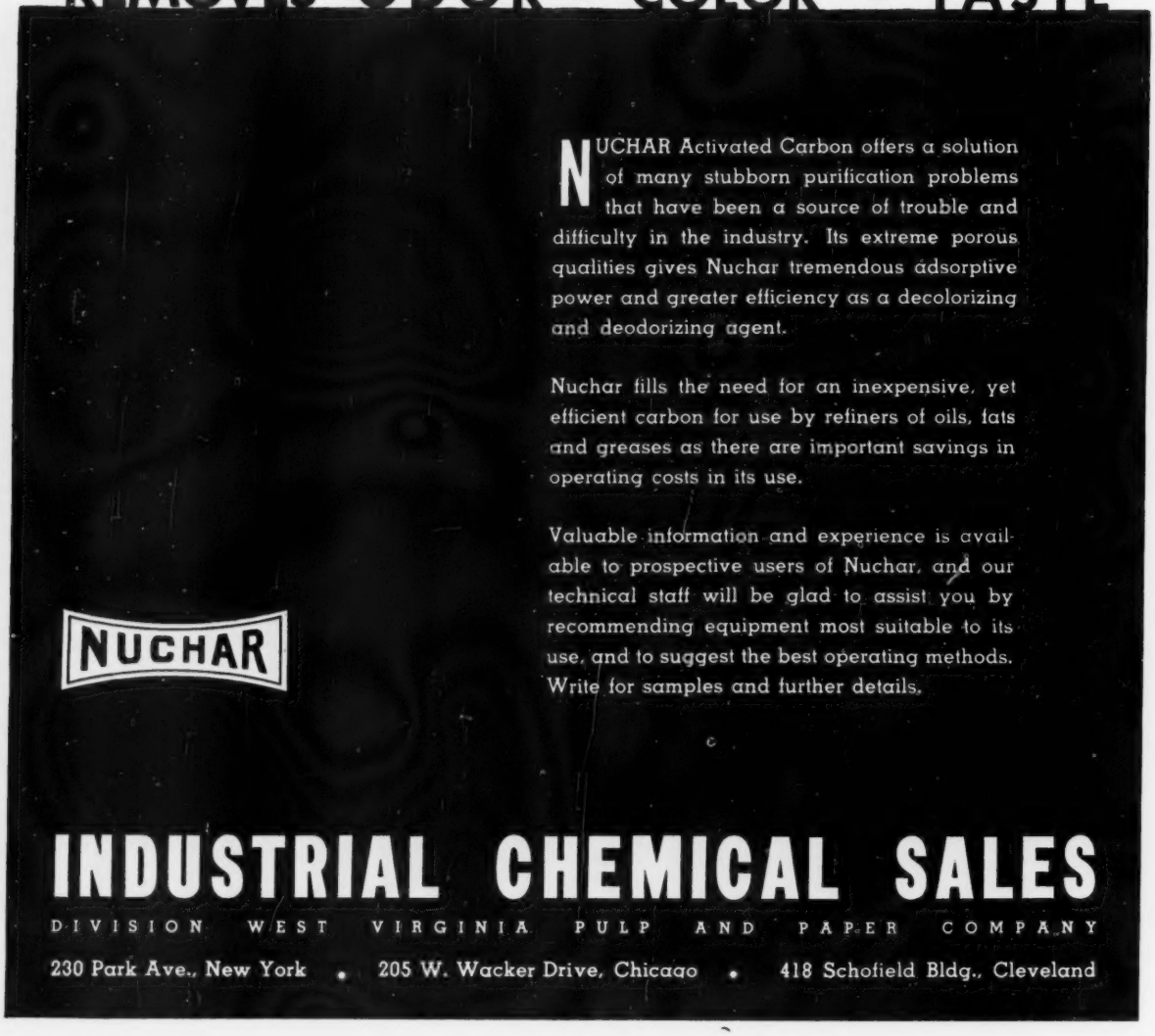

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PRODUCTION SECTION

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries*.

Liquid Soap Specialties

AMONG the numerous types of liquid soaps on the market, more attention has been given of late to the specialty products, that is solvent-soaps, hexalin-soaps, triethanolamine-soaps, shampoos, and the like, all of which are designed for special purposes. In a general discussion of liquid soaps recently by J. Davidsohn and A. Davidsohn in *Soap, Perfumery & Cosmetics*, (London) 10, 836, 1937, these newer developments were touched upon. The authors also mention the development and prevention of rancidity in liquid soaps, placing the blame on the presence of metallic salts, and suggesting the use of a mixture of potassium acetate and potassium lactate, and also sodium silicate and safrol as retarding agents. They recommend borax to prevent clouding and the use of freshly precipitated aluminum hydroxide as a flocculating and clarifying agent.

Cyclohexanol and methyl cyclohexanol are especially useful in solvent-containing liquid soaps, because of their high solvent action on fats, oils, waxes, resins, dyes, mineral oils etc. In combination with ordinary soaps, cyclohexanol and methyl cyclohexanol behave like turkey red oil and they also dissolve magnesium and calcium soaps and hold them in solution in water. These soaps consequently prevent annoying lime soap deposition. Formulas are as follows:

1. 500 kg. linseed oil
   250-300 kg. cyclohexanol
   199 kg. caustic potash, 50°Be.
   1208 kg. water
2. 500 kg. linseed oil fatty acids
   750 kg. methyl cyclohexanol
   208 kg. caustic potash, 50°Be.
   292 kg. water
3. 500 kg. coconut oil fatty acids
   250 kg. cyclohexanol - methylcyclohexanol (1:1)
   270 kg. caustic potash, 50°Be.
   1300-1800 kg. water
4. 184 kg. linseed oil
   275 kg. cyclohexanol
   73.5 kg. caustic potash
   387 kg. water
   80 kg. carbon tetrachloride
5. 20 kg. olein
   4 kg. butyl cellosolve
   20 kg. pine oil
   12.5 kg. triethanolamine
   120 kg. water
   15 kg. isopropyl alcohol

The ingredients of each batch are stirred together in a pan heated by indirect steam until a clear solution is formed. A sample should give a clear solution in distilled water and the alkalinity should not be too high. Other solvents such as benzine, benzol, and the higher boiling petroleum fractions may be used in combination with cyclohexanol. The last formula is especially good for removing grease. In this, the first three ingredients are mixed, and stirred into a solution of the triethanolamine in water. Each solution should be heated to about 45°C. (113°F.). The final mix is clarified with isopropyl alcohol.

As a basis for ordinary liquid shampoo soaps the same combinations may be used. From 2-5 per cent of alcohol should preferably be included. Sulfonated Lorol T.A. may also be used to prevent lime soap precipitation, which is especially important in shampoos. Triethanolamine soaps are to be recommended for delicate scalps and hair. Pure coconut oil fatty acids, 100 parts, require 64 parts of technical triethanolamine for complete saponification; 100 parts of olein require 48 parts of triethanolamine and 100 parts of castor oil fatty acids require 46 parts of triethanolamine. The presence of carbitol is advantageous in these products, as are also olein and castor oil fatty acids in admixture with the coconut fatty acids.

A small proportion of olein or wool fat may be used for superfatting liquid soaps and can be brought into clear solution with turkey red oil. If it is desired to leave an appreciable quantity of oil on the scalp after shampooing, a supplementary application of hair oil is advisable.

It is customary in liquid hand soaps to use a refreshing perfume with a disinfectant note. For shampoo soaps, rather more delicate odors are preferred except in the case of tar or camomile soaps. Solvent con-

taining soaps are perfumed, if at all, with heavier covering perfumes such as spike oil, terpineol, pine needle oil etc. Such odors as that of chypre, hyacinth, jasmin, rose, sandalwood, orchidee, lavender, bergamot and eau de cologne are highly recommended. Terpene-containing perfumes are unsuitable. Alcohols are satisfactory such as citronellol, geraniol, linalol etc. The action of free alkalis on various perfumes is well known. When alcohols is used, it is best to dissolve the perfume in it and add the solution to the cold liquid soap. Before any formula is adopted it should be tried on a small scale in order to work out any modifications which may seem advisable, especially when it may be desired to replace raw materials listed with those more readily available.

Recovery of Sludge Glycerine

About 88 per cent of glycerine in filtered calcium sulfate sludge can be recovered by 2-3 alternate extractions and settlings with 2 parts of hot water, in a special autoclave fitted with a stirrer and 3 side tubes near the bottom. By means of compressed air the extractions are discharged through the 2 upper tubes into the filter press and the sludge through the lower tube. By using the last wash water in subsequent extractions and in the saponification of oils, the consumption of steam for the concentration of glycerine solutions can be considerably reduced. P. Naumenko. *Masloboino Zhirovoe Delo* **13,** No. 2, 18-19 (1937).

Ketonic Rancidity in Oils

The rate of development of ketonic rancidity and the peroxide formation in lard and other unsaturated fats is greatly increased by the action of daylight and elevated temperatures (38°C.). The peroxides are formed before the ketones; the two processes develop at first very slowly and then on reaching a definite stage proceed at a highly accelerated rate. A. A. Zinov'ev and S. V. Drukker. *Masloboino Zhirovoe Delo* **13,** No. 2, 6-8 (1937); through Chem. Abs.

Products and Processes

Fatty Alcohol Derivatives

The sodium alcohol sulfates are not the only useful types of fatty alcohol derivatives, although they are the most common. Fatty alcohols may be esterified with pyrophosphoric acid instead of sulfuric acid, to give esters which possess better washing properties than the corresponding sulfates. Another alternative is the thiosulfuric ester. Dodecyl thiosulfuric ester is suitable for the washing of cotton but may also be used as a foaming and stabilizing agent, and as a soap substitute.

The treatment of a fatty alcohol with chlorine has the effect of lowering the melting point, while subsequent sulfation of the chlorinated alcohol gives a sulfuric ester whose solubility is increased, without impairing the wetting power. Naturally only saturated fatty alcohols are referred to. E.g., cetyl alcohol takes up chlorine when treated with the gas in carbon tetrachloride. If the latted solvent is removed and the chlorinated fatty alcohol is sulfonated, a useful wetting and cleansing agent is obtained. A. H. Prevost. *Chemical Age* **37,** 271 (1937).

Dermatological Soaps

Pharmaceutical soaps which have a dermatological action are of various kinds. Peru balsam possesses antiscabietic or antimange properties and is nonirritating to the skin. If very much is present in soap, the latter becomes brown colored and this color will eventually show up on the wash. This drawback limits the usefulness of Peru balsam. In its place there has been used a combination containing benzyl benzoate with additions of Epicarin (hydroxynaphthyl-*o*-hydroxy-*m*-tolyl acid) and Eudermol (nicotine salicylic acid). This combination is said to be efficacious in relieving itching caused by a number of kinds of skin ailments. Anthrasol has similar properties.

The ammonium salt of ichthyolsulfonic acid is much used for its antiseptic and reducing action for cases of eczema, acne, and erysipelas. Of late this has often been replaced in soaps with thiol. With regard to the much used precipitated sulfur for acne and seborrheic conditions, soaps may be prepared containing sulfur in finely divided form, from colloidal sulfur which contains 80 per cent sulfur and 20 per cent protein. This disperses in water in the form of a milky liquid. Resorcin monacetate may be added to soap for use on the scalp when special treatment is needed. A soap addition which would be nonirritating is a mixture of boric acid with glycerine and lanolin. Monsoin. *Deutsche Parfümerie Ztg.* **23,** 377 (1937).

Hand Soap

A dry cleaning agent for the hands of motorists etc. consists of a cream-like mixture of unsaponified or partly saponified esters of stearic or palmitic acid, and a small amount of a chlorinated hydrocarbon such as carbon tetrachloride, with optional addition of potash, borax and an abrasive such as powdered pumice. Chemische Fabrik Frankfurt-West Alexander Dauch. German Patent No. 647,523.

Lamepons in Shampoos

The first formula below is for an oil shampoo, the second for a soapless shampoo:

		parts
1.	Lamepon Ph.S.	50
	Sulfonated castor oil	15
	Distilled water	35
2.	Lamepon 4B	95.0
	Glycerine	4.5
	Perfume, water—soluble	0.5
	Distilled water as desired	

Lamepon Ph.S. has a pH value of about 9. It is used for lime-resistance. Lamepon 4B has a pH value of about 6. The Lamepons have

a very mild action on the skin, presumably because of their being albumin derivatives and therefore akin to the keratin of the hair. They are compatible with sulfonated oils and with liquid soaps. S. P. Jannaway. *Soap, Perfumery and Cosmetics* **10,** 864-5 (1937). (Hugo Lorenz, Ltd. 9 Idol Lane, London, E.C. 3.)

Floating Soap

Floating soap can be made with so-called "expanded" cork powder, which is a commercial product. The powdered cork is heated to a definite temperature, which makes the material lighter in weight than ordinary cork and insensitive to the effect of water and alkali. Soap containing the powdered cork is more efficient because of the mechanical cleansing action of the insoluble material. W. O. *Allgeneine Oel—und Fett—Ztg.* **34,** 407-8 (1937).

Shampoo Mixtures

A washing material for use as a shampoo consists of at least 2 parts of a water-soluble soap and 1 part of a mixture of a lime soap dispersing agent and alkali metaphosphate. Additional ingredients may include polysaccharides such as starch, and drug extracts such as camomile or henna extract, hormones, vitamins etc. Hans Schwarzkopf Kommanditgesellschaft. British Patent No. 465,546.

Soap Preparation

A soap preparation contains a mixture of soap and sodium lauryl sulfate, alone or with other additions, especially washing, bleaching and fat-solvent media. Am. Hyalsol Corp. Canadian Patent No. 369,772.

Cleansing Cloth

A re-usable absorbent cleansing cloth which is alkaline in nature and is kept moist by glycerine, is suitable for use on the skin or other surfaces. The cloth is impregnated with a soap-free composition consisting of trisodium phosphate 15-85 parts, glycerine 85-15 parts, and borax in a quantity amounting to 2-150 per cent of the trisodium phosphate. Paul A. Woronoff. U. S. Patent No. 2,093,824.

Naphsulfonate Detergents

These are composed of a water-soluble ether of cellulose, starch, lichenin, xylose or other starch-like substance and sodium naphthalenesulfonate, sodium dimethylnaphthalenesulfonate, sodium benzylnaphthalenesulfonate or similar wetting agent. Per salts, soda and other detergents may be added. Suitable ethers are methylcellulose, dimethylstarch, hydroxyethyl- or hydroxyethyl-methyl-cellulose and hydroxyethylstarch. An example is a mixture of 80 parts of soda ash, 8 of sodium naphthalenesulfonate, 1.5 of dimethylstarch, 0.6 of sodium metaphosphate and 5 of sodium perborate. Kalle & Co. A.-G. British Patent No. 465,688.

Dry-cleaning Composition

A dry-cleaning composition consists of a volatile organic liquid of the dry-cleaning type plus a salt of an alkyl aromatic sulfonic acid of the benzene series in which the alkyl group is an open chain hydrocarbon containing 12-23 carbon atoms. The National Aniline & Chemical Co., Inc. Canadian Patent No. 369,508.

Soap-wrapper Discoloration

Discoloration of white paper to soap is due in part to the reaction of carboxylated cellodextrin with alkali and atmospheric oxygen, or to the reaction of lignin with free alkali in the soap, or to both. It is also probable that cellulose degradation products, particularly those containing aldehyde groups, react with alkali to cause a portion of the discoloration. W. R. Keating. *Paper Trade J.* **105,** No. 10, 41-6 (1937).

Sand Soap

Dry sand, powdered resin and soap powder are heated to 100°F. and compressed into block form. A. R. Griffiths. Australian Patent No. 101,477.

Bleach and Rinsing Agent

A rinsing product having a bleaching action, particularly for use in iron-containing water, contains one part of a compound yielding oxygen, 1-3 parts of salts of phosphoric acids poorer in water than orthophosphoric acid, and if desired, other inorganic salts of alkaline reaction, e.g., tetrasodium pyrophosphate 50 parts, sodium perborate 17, and calcined soda ash 34 parts. Henkel & Cie. G.m.b.H. French Patent No. 46,658.

Nitrogenous Wetting Agents

Assistants useful in the textile, leather, cosmetic and other industries are obtained by condensing mono- or polymeric 1, 2-alkyleneimines with carboxylic acids, their anhydrides, halides or esters. E.g., ethyleneimine is condensed with palm-kernel oil fatty acid chlorides, stearic acid chlordie, stearic acid anhydride etc. I. G. Farbenindustrie A.-G. British Patent No. 466,270.

Heavy-duty Paste Soaps

Soaps to remove stains, grease, tar and similar types of soil are frequently prepared in the form of pastes, with a basis of potash soap. Various additions such as turpentine, bezine, trichloroethylene, methyl hexalin, Turkey red oil, etc., are made to assist in the removal of oily matter and stains. For the mechanical removal of soil, such mineral products as pumice and chalk are incorporated. The preparation of these soaps is not difficult, although it should be done carefully. A suitable formula for the soap base is as follows:

	Parts
Coconut oil fatty acids	25
Peanut oil fatty acids	25
Soybean oil fatty acids	10
Caustic potash solution, 50°Bé.	30
Potash	4
Water	60

The potash, caustic potash and water are mixed and brought to boiling. At the same time the fatty acids are heated to about 75-80°C. (167-176°F.). It is necessary to have the lye at boiling temperature in order to bring about complete saponification. The fatty acids can be added individually or as a mixture. Saponifi-

cation is very rapid and is aided by mixing. The soap clears up quickly and can be tested for alkalinity with phenolphthalein. It is immaterial if the soap should be left a little sharp, since the kind of soil against which this soap will be used will ordinarily be somewhat acid in nature. The soap so prepared is worked up while still warm but not too hot, with suitable additions. For example, 505 parts of the soap are mixed with:

3 parts heavy benzine
50 parts trichloroethylene
1? parts methyl hexaline.

The new mixture is in turn mixed with a powder containing equal parts of pumice and Neuburger chalk until the desired consistency is obtained. The consistency may change somewhat on standing but should be suitable for packing in tubes. The tendency is for the paste to become more firm as it stands. Glycerine can be used as a softening agent if the paste gets too hard. An alternative is to add 4 per cent of a sugar solution made by dissolving 2½ parts of sugar in 1½ parts of boiling water. Potash can also be used for the same purpose.

Another formula using the same soap base is:

	Parts
Potash soap	50
Aqueous ammonia, 25%	5
Turkey red oil, 95-100%	5
Ethylene glycol	2

Pumice and kaolin are added until the proper consistency is reached for use in tubes. This depends mostly on the quality of the pumice. Spike oil or citronella oil are suitable as perfume. R. K. *Seifensieder-Ztg.* 64, 763-4 (1937).

◆

Hydrogenation of Whale Oils

The Antarctic whale oil used had a saponification equivalent of 286.5 and an iodine value of 109.3. The oil contained a complex mixture of glycerides. Owing to the presence of only 16-20 per cent of combined C_{20} and C_{22} acids, almost half of the oil probably consisted of glycerides containing only acids of the C_{18}, C_{16} and C_{14} series. A hydrogenated whale oil of similar iodine value to beef or mutton tallow contains about the same proportion of fully saturated glycerides as the latter, and because of the relative lack of C_{20} or C_{22} saturated acids at the earlier stages of hydrogenation, the component acids of such fully saturated glycerides are more similar to those of the corresponding tallow components than might at first be expected. The liquid components of the rest of the fat are entirely different from those of tallow owing to the presence of C_{20} and C_{22} unsaturated acids and of the "*iso-*" monoethenoid acids of hydrogenation. T. P. Hilditch and J. T. Terleski. *J. Soc. Chem. Ind.* **56**, 315-22T (1937).

Cod-liver oil having an iodine value of 177.7 is hydrogenated in the first phase by reduction of polyethenoid unsaturation. The production of fully saturated glycerides in the first half of the hydrogenation is negligible. After that the production gradually accelerates, becoming very rapid when the iodine value of the fat is small. D. A. Harper and T. P. Hilditch. *Ibid.* 322-9T (1937).

◆

Preferential Hydrogenation

In the catalytic reduction of natural fats the diethenoid acids of the C_{20} and C_{22} series are, in the glycerides, preferentially reduced to the monoethenoid. The effect is not very large and the two reactions, di-unsaturated to mono-unsaturated and mono-unsaturated to saturated, take place side by side, but the former is the more pronounced. The partial nature of this selection is remarkable when the well-established selective reduction of linoleic before oleic acid is considered. Such selective effects are well developed in a simple fat where di- and mono-unsaturated acids of the C_{18} series are the only acids present apart from saturated acids. In a more complex fat containing many acids the preferential reduction of the di-unsaturated acids to mono-unsaturated is not nearly so well developed. In most of the cases studied there is a tendency for all the rates to become equal at low iodine values, indicating that at such stages the selective effects have vanished. D. A. Harper. *J. Soc. Chem. Ind.* **56**, 308-10T (1937).

Recovery of Waste Grease

Recovery of waste grease has been reported by H. W. Smith, City Sewage Engineer of Bradford, England. The grease is subjected to a series of processes, each one operating on the product of the previous one. Process 1 consists of the conversion of the grease into a crude soap, which may be prepared in the form of a powder for sale. Many tons of the crude soap have been sold from the first experimental plant. In process 2, the crude soap is extracted with a solvent to remove unsaponifiable matter, the soap then being in an almost pure anhydrous form. It can be blended in various low quality soaps. Process 3 is the decomposition of the pure soap with acid to give a hard fatty acid of stearin-like character. Process 4 relates to the distillation of fatty acids. *Chemical Trade J. & Chemical Engineer.* **101**, 338 (1937).

◆

Stored Vegetable Oils

The acid content of purified vegetable oils increases on storage by not more than 0.3 per cent annually. Air and light have but a very slight effect. With oils containing enzymes a rapid increase in acidity is observed. M. Gisondi. Ann. staz. chim. agrar. speri. Roma **15**, II. No. 323, 12 pp; through Chem. Abs.

◆

Detection of Whale Oil

The Tortelli-Jaffe reaction is suggested as best suited for the detection of whale oil. The sensitiveness of this reaction is markedly increased by substituting formic acid for the specified acetic acid. R. Wait. *Pharm. Zentralhalle* **78**, 469-70 (1937).

◆

Zinc and Calcium Soaps

The precipitation of zinc soaps gives rise to characteristic grayish white spots on washed goods which darken on exposure to light. With hard water, traces of calcium soaps may have the same effect. Kehren. *Melliand Textilber.* **16**, 513.

SOAP PERFUMING

WHAT not to do in soap perfuming,—all the "don'ts" which have been built up by soap perfumers over a long period of years, — which perfuming materials are incompatible with each other or with the soap to be perfumed,—in fact, a lot of perfuming prohibitions are discussed in some detail in a recent issue of the *Givaudanian*, published by Givaudan-Delawanna, Inc., New York. Because of the valuable character of the comment, and at the risk that it may already have been seen by many soap perfumers, it is reproduced here rather fully.

"It should be borne in mind that the so-called neutral soaps are usually nothing but the sodium salts of such aliphatic acids as palmitic, stearic, and oleic, and in the case of coconut oil soaps, of myristic, lauric, caproic and caprylic acids as well. Such salts are neutral in the sense that they represent the combination of an acid with an equivalent portion of alkali, and indeed, under anhydrous conditions, they may have absolutely no effect upon such an indicator as phenolphthalein.

On the other hand, once they are dissolved in water, quite a different situation obtains. The organic acids of which such soaps are composed are essentially weak acids. The alkali component, on the contrary, is the residue of a very strong base, one of a high dissociation constant. Consequently, in aqueous solution, such salts, just like sodium acetate, or sodium carbonate for instance, have a very definite alkaline reaction. Moreover since many toilet soaps contain as much as 20 per cent of water, one must always count on at least a partial ionization, and therefore on a very definite, if small, alkaline reaction.

The importance of even so small a percentage of free alkali may be seen in the following calculation. Let us assume, a toilet soap with 0.2 per cent free alkali, a not unusual condition. One kilogram of such soap will be equivalent to 2g. of sodium hydroxide. Let us further suppose that this soap is to be perfumed with a composition containing linalyl acetate, for instance, with one per cent bergamot oil. The bergamot oil itself contains about 40 per cent linalyl acetate. The 10g. of oil used would then have about 4g. of the ester; it would require only 0.8g. of alkali to completely hydrolyze this quantity of the odoriferous ingredient.

If such a reaction can take place in a solid soap, it is easily seen that it assumes even greater importance in the instance of liquid soaps, or in creamy type preparations or liquid shampoos; for the more dilute the solution, the greater the hydrolysis of the soap, and the ionization of the weak acid and strong base so formed.

It should be pointed out, however, that this situation does not hold in the case of the new detergents, such as sodium lauryl sulfate. Here, the alkali component remains a strong base, but the acid formed, an alkyl sulfonic acid, is equally as strong. Consequently, we have a truly neutral solution, even in the presence of much water.

Before plunging into the detailed discussion of the effects of various perfume materials, it should be pointed out that the perfumer is almost always blamed if any batch turns out to have color spots, or to be off-tint, or to develop off-odors. Oftimes, he may be to blame. But it need not always be his fault. Such accidents may be traced to incomplete saponification, the use of impure oils, or of hydrogenated fats, in which a trace of the metallic catalyst may remain, or of bleached oils from which all of the bleaching agent has not been removed, traces of metals from the molding or pressing processes or from other sources.

Now it would be a mistake if, in order to achieve a colorless soap, one would use only raw materials which are colorless or do not impart any color, since in this case, one would have to get along without the most effective fixatives, such as natural oak moss, balsam Peru, castoreum, as well as patchouli and vetiver oils, and dispense with the aromatics which are classified under the generic name of "resinoids," i.e., those highly colored extraction and distillation residues which are so valuable in soap perfuming. As is well known, these products give to soap compositions the necessary odor fixation and roundness.

Eight different types of odor-bearing groups have been recognized by perfumers. These so-called osmophores are:

1. The carbinol group (or alcohol): C-OH.
2. The carbonyl group (as in aldehydes or ketones) C=O.
3. The ester group: C-OOR, where R can be any aliphatic or aromatic radicle, such as methyl, ethyl, or benzyl.
4. The ether group: R-OR'.
5. The Phenol-ether group: C-OR, in which R is aliphatic or aromatic, but in which the carbon is part of an aromatic nucleus.
6. Nitro or amino groups: NO_2; NH_2.
7. Heterocyclic groups containing nitrogen.
8. Unsaturated groups (with double or triple bonds).

These groups are sensitive to a multitude of reagents, perhaps most important of which are the ultraviolet rays of sunlight, air, or to be more specific, its oxygen component, heat, combined or free alkali, free acid, and certain metals. One or more of these factors may be responsible for the destruction of the desired odor, or the production of unwanted color in the soap. In this article the carbinol and carbonyl groups will be discussed.

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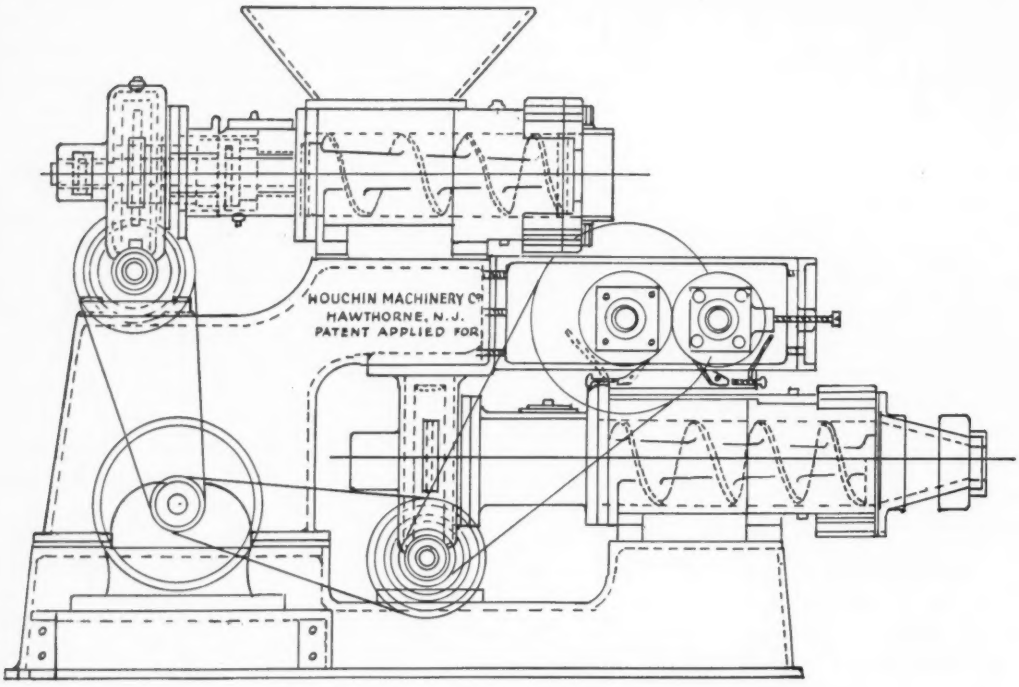

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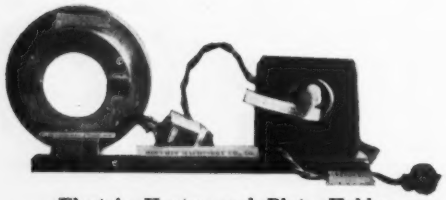

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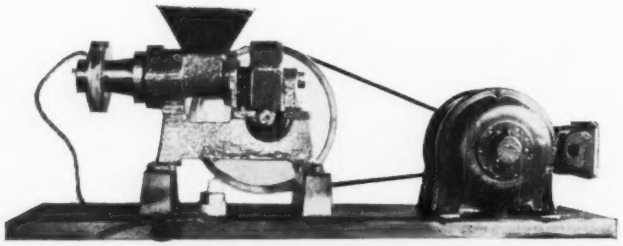

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The Carbinol Group. It is customary and convenient to subdivide this group into primary ($-CH_2OH$), secondary ($=CHOH$) and tertiary ($=COH$) types. While the primary alcohols are fairly stable to alkalies in the cold, and to weakly acidic reagents, the secondary alcohols, especially when slightly warm, have a decided tendency to undergo dehydration, or a splitting out of water. In this case, the OH of the water formed comes from the secondary alcohol group, and the H from the adjacent carbon atom. The residue is an unsaturated hydrocarbon. Not only are such compounds often worthless to the perfumer as far as contributing to the odor, but they also form the basis for polymerization to resin-like substances.

The tertiary alcohols are still more sensitive, and are particularly apt to form isomers. Linalool, for instance, may be transformed into geraniol or terpineol. Moreover, in the presence of the same dilute acids, dehydration of the resulting products may ensue, with the consequent formation of unsaturated hydrocarbons, in this case, diterpene, which is of little interest so far as odor is concerned.

On account of the stability of the primary alcohols, they, or essential oils in which they are the predominant odor-bearing constituents, can be used in soap compositions with little fear. Among such oils are geranium, palmarosa, rose, ginger grass and sandalwood oils from which little damage to the color, or spoiling of the odor is to be expected. At the same time it must be remembered that these substances are subject to oxidation to other compounds of different odor characteristics. A combination of these primary alcohols with suitable anti-oxidants may serve to overcome this difficulty.

Certain precautions with regard to citronellol appear to be in order. Of its two modifications, the levo-rotatory form found in rose oil, is usually too expensive for the soap perfumer to use. The dextro-rotatory form is obtained from the naturally occurring aldehyde, citronellal, by reduction. The aldehyde itself has no rose odor but rather an odor reminiscent of balm and hay. Under the influence of even very weak acids, or for that matter in the presence of phenol, the aldehyde is transformed into an isomer, isopulegol, which yields an unpleasant camphoraceous odor. Since the citronellol oxidizes slowly to citronellal, which in turn may be converted to isopulegol, the soap perfumer must be cautious in its use.

Phenylethyl alcohol, on the other hand, is partially transformed by warm alkalies to styrene ($C_6H_5-CH=CH_2$), by loss of one molecule of water. This styrene has a very obnoxious illuminating gas odor, and is therefore to be avoided. Moreover, it has a great tendency to resinify.

Benzyl alcohol, which finds considerable use in soap perfumes of the jasmin type, is also a primary alcohol. So long as it is absolutely free of chlorine, it is stable with respect to the influence of the agents listed above. Needless to say, the same precaution holds for the other major ingredient of jasmin compounds, benzyl acetate; it should be used only if absolutely free of chlorine.

Another very popular primary alcohol is cinnamyl alcohol, which finds application in giving a light sweetish tone to hyacinth, rose and other floral perfumes and compositions. Besides the alcohol group, this compound also has another osmophoric combination, namely the double bond. ($C_6H_5CH=CH-CH_2OH$). This unsaturation makes cinnamyl alcohol very sensitive to light and air, under the influence of which it is partially oxidized to cinnamic aldehyde and cinnamic acid, and partially transformed to odorless and viscous polymers through reactions originating with the double bond. For these reasons, cinnamyl alcohol should be used in soap perfumes only when the perfumer can be sure that it will not be exposed to oxidizing influences; cinnamic aldehyde has a very strong spicy note.

Caution is especially desirable when it is planned to mix the cinnamyl alcohol with extracts obtained from leaves or woody products. These usually contain more or less of the bicyclic terpene, pinene. Pinene has the very interesting, but, from the perfumer's point of view, very unfortunate property of being able to form ozonides very readily. This reaction actually has the effect of changing ordinary oxygen into the highly reactive tri-aromic ozone form. Even dilute pinene, such as might be present in soap, forms the ozonide.

Once the ozonide has been formed with the pinene, it readily attacks any other unsaturated groups, such as that in the cinnamyl alcohol, thus rapidly destroying the characteristic odor, and increasing still further the tendency toward polymerization.

Consider the effect of this pinene-ozonide on the salts of the fatty acids which constitute soaps. Under the catalytic influence of the pinene-ozonide, the double bonds in such compounds as sodium oleate are attacked, and the molecule may be split with the consequent formation of aliphatic acids of lower molecular weight; these may not only polymerize and cause a general browning of the soapy mass, but also confer the well-known, obnoxious odor of rancid soap.

To this property may be attributed color difficulties with certain lavender oils, many of which, even those of genuine French origin, contain a considerable proportion of pinene. Perfumers would be well advised to use only those essential oils which contain little or no pinene.

The secondary schools, exemplified by menthol, are usually encountered, not in the pure state, but as components of essential oils. Thus caraway oil contains dihydrocarveol; cypress oil has sabinol, and so forth. These particular essences, however, are seldom employed by soap perfumers, for the reasons cited above.

Of the tertiary alcohols, linalool and terpineol are the most important. The former naturally occurs in two optically active isomeric forms, the odors of which are easily distinguished. The levo-rotatory linalool occurs in bois de rose oil from Cayenne and Brazil, in Mexican oil of linaloe, in Ho oil, and either free or

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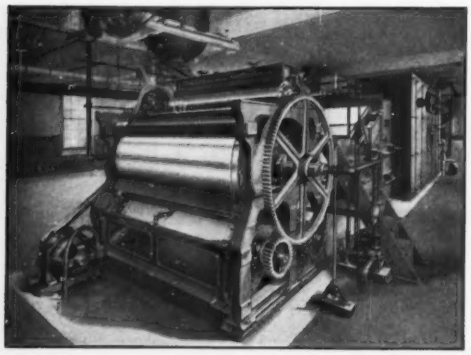

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as the ester in lavender, spike, bergamot, and petitgrain, and in traces in many other essential oils. The dextro-rotatory form occurs in large proportions only in coriander oil. Practically speaking, the most important of these are the rosewood oil and Ho oil, while the Mexican oil of linaloe is fast disappearing from the market. Because of the high price of oil of coriander, it can be used only in luxury type soaps. Moreover, the soap perfumer must be wary of its pinene content.

Although free alkali does not react in the cold on oils containing linalool, organic acids, such as acetic acid, or the acids formed by the ozonide decomposition of oleic acid, formic and mineral acids, convert linalool into terpineol, which in turn is easily transformed into dipentene. Care must therefore be taken in combining linalool with easily oxidized aldehydes, for the resulting acids may be sufficient to catalyze the change to terpineol. Such aldehydes as heliotropin (piperonal) and Buxine, which are not easily oxidized, can be mixed safely with linalool. In spite of the acid nature of phenols, they do not have the same effect as acids; consequently linalool may be used together with eugenol, isoeugenol, amyl salicylate, thymol, and similar compounds. Linalool should never be exposed to warm alkali, whether it be free, or in ester form, isolated, or present in essential oils, lest the fineness of its odor be destroyed.

While terpineol is fairly stable, considering that it belongs to the family of tertiary alcohols, other difficulties ensue. Ordinary terpineol is a mixture of three isomers, alpha, beta and gamma; often a fourth substance, terpinenol is also present. Under the influence of acids, these substances are more or less interconvertible, so that as an end result usually the same mixture is found. Consequently, the terpineol appears to be stable, yet it does not have the fine odor associated with a highly purified terpineol, which is easily converted in the presence of acids or alkalies into the less interesting isomers.

The Carbonyl Group. Again, light, air, alkalies and acids must be taken into consideration in studying the properties of these aldehydes and ketones.

Moreover, the aldehydes, particularly have the property of condensing with molecules having two so-called "active" or "Vorlander" hydrogens. In the familiar aldol condensation, acetaldehyde forms aldol —CH_3CH_2OH CH_2CHO. Active hydrogens are those which are attached to a carbon adjacent to an electrically negative group, such as CO, COOH, C_6H_5. With amino groups, the oxygen of the carbonyl group combines with the two hydrogens to form one molecule of water, and a "Schiff's Base." The soap perfumer must give due consideration to the possibility of the formation of such colored compounds, if, for instance, he wishes to combine an anthranilic ester with an aldehyde. It is easily understood that such reactions may modify, if they do not altogether destroy the original odor notes of the components.

The aldol condensation, moreover, is responsible for the polymerization of many aldehydes containing a methylene (CH_2) group. The condensation process may continue indefinitely, resulting in the formation of high molecular weight resinoid substances. This phenomenon may be considered in connection with phenylacteal-dehyde, of the formula: $C_6H_5CH_2CHO$. On the other hand, hydratropic aldehyde, which is in many ways chemically similar to phenylacetaldehyde does not undergo this condensation, because one of the hydrogen groups on the carbon adjacent to the CHO group has been replaced by methyl — $C_6H_5.C(CH_3)$ H.CHO.

The polymerization of aldehydes is repressed in the presence of hydroquinone, or for that matter in the presence of 96 per cent alcohol. The higher fatty aldehydes react like phenylacetaldehyde, but undergo polymerization far more slowly, and consequently lose little of their odor. They need only be used in a 10 per cent alcoholic solution for safety.

Decolorizing Glycerine

It was necessary to use about 8 per cent of various highly active bleaching earths to obtain an average of 50 per cent bleaching of raw Twitchell glycerine. One sample of activated carbon gave a 97.5 per cent bleach at 3.2 per cent concentration. E. Erdheim. Ole, Fette, Wachse, Seife, Kosmetik **1937,** No. 8, 2-3.

Refining Castor Oil

The usual difficulties in the refining of castor oil and separating the soapstock can be eliminated by the use of soda ash in place of caustic soda. In tests on a commercial scale the best results were obtained by introducing the required amount of 20°Be. anhydrous soda ash solution containing 2 per cent of sodium chloride, into 8 tons of oil with 1 per cent acidity, inside of 1 hour and allowing to settle for 4-5 hours. The advantages claimed for this method as compared with refining with 12°Be. caustic soda solution are: No formation of an emulsion; odorless soapstock; the ratio of neutral oil to fatty acids is 1.91:1 instead of 3.78:1; the oil in the soapstock is easily separated by heating instead of diluting with the resulting loss of oil; the high clarity of oil is retained for over 2 years. M. Z. Klyachko. *Masloboino Zhirovoe Delo* **13,** No. 2. 15-17 (1937); through Chem. Abs.

Naphthenic Liquid Soap

About 5 per cent of naphthenic acid in the form of sodium or potassium naphthenate may be included in liquid soaps. Sodium naphthenate has a high gelation capacity and a high disinfecting power. Its gelation capacity is useful in the production of waterless soaps, which can be used when no water supply is available. Sodium naphthenate is also mixed with trisodium phosphate and triethanolamine as a base for rug shampoos. One of the principal sources of production of naphthenic acid is Rumania. *Soap, Perfumery and Cosmetics* **10,** 846 (1937).

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Complete copies of any patents or trade-mark registration reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine and Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

No. 2,094,831, Insecticide. Patented October 5, 1937, by Donald L. Vivian and Herbert L. J. Haller, Washington, D. C., dedicated to the free use of the Public in the territory of the United States of America. As insecticides hydroxy azo compounds containing at least one hydroxy group and at least one nitro group.

No. 2,095,464, Insecticide, Patented October 12, 1937 by Nelson A. Chesnutt, Jr., Springfield, Pa., assignor to General Chemical Company, New York, N. Y. The method of producing free-flowing sodium fluoride which comprises precipitating sodium fluoride from solution, separating the bulk of the solution from the precipitated salt to form a body of salt in damp condition, forming a water solution of soap, then adding the solution to the precipitated sodium fluoride while the salt is still damp from the separator, and then drying the sodium fluoride.

No. 2,095,939, Insecticide, Patented October 12, 1937 by Donald L. Vivian and Herbert L. J. Haller, Washington, D. C., dedicated to the free use of the Public in the territory of the United States of America. An insecticide comprising a compound containing homocyclic nuclei joined by one azo group, and containing at least one halogen atom in addition to at least one hydroxyl group.

No. 2,095,940, Insecticide, Patented October 12, 1937 by Donald L. Vivian and Herbert L. J. Haller, Washington, D. C., dedicated to the free use of the Public in the territory of the United States of America. An insecticide comprising an arylazo compound in which the nuclei are substituted by at least one halogen atom.

No. 2,095,941, Insecticide, Patented October 12, 1937 by Donald L. Vivian and Herbert L. J. Haller, Washington, D. C., dedicated to the free use of the Public in the territory of the United States of America. An insecticide comprising a compound containing homocyclic nuclei joined by one azo group, and containing in addition to not less than one hydroxyl group, not less than one halogen atom and not less than one alkyl group.

No. 2,096,188, Process for Soap, Glycerine, Alcohols, etc., Patented October 19, 1937 by Henry W. F. Lorenz, Jersey City, N. J., and Frederick W. Brown, New York, N. Y., assignors, by direct and mesne assignments, of thirty-three and one-third percent to the said Lorenz, thirty-three and one-third per cent to Theodore M. Sewards, and thirty-three and one-third per cent to Charles H. Wilson, both of New York, N. Y. A process of producing an anhydrous soap and glycerine in a reaction chamber through which continuously flows a stream of super-heated steam, which consists in spraying an unsaponified mixture of fat or oil and a caustic alkali solution in commingling relationship in the stream of super-heated steam, thereby effecting immediate and complete saponification of the saponifiable constituents of the fat or oil and removal of the glycerine, moisture and other unsaponifiable constituents, and then recovering the anhydrous soap and glycerine.

No. 2,096,678, Process for Rotenone. Patented October 19, 1937 by Eric William Fawcett, Winnington, Northwich, England, assignor to Imperial Chemical Industries, Limited. Process for the production of rotenone preparations which comprises subjecting a natural rotenone-containing substance to distillation without ebullition at a pressure of 10^{-2} to 10^{-6} mms. of mercury under such conditions that the evaporating and condensing surfaces are substantially co-extensive and are in close proximity to one another, and collecting the distillate.

No. 2,096,885, Insecticide, Patented October 26, 1937 by Theodore R. Donlan, Irvington, N. J., assignor to Stanco Inc. An insecticidal composition comprising as an active ingredient a substantial quantity of mineral oil of 300°F. to 600°F. boiling range consisting predominantly of parafinnic hydrocarbons segregated from the normally accompanying naphthenic hydrocarbons.

No. 2,096,922, Mineral Oil Solution of Derris, Patented October 26, 1937 by Nicholas A. Sankowsky, Scotch Plains, N. J., assignor to Stanco Inc. The process of preparing a mineral oil solution of the extractives of plants of the genera Deguelia, Lonchocarpus and Tephrosia, which comprises extracting the plants with a volatile organic liquid selected from the group consisting of benzol, ethylene dichloride and chloroform, and capable of dissolving out ingredients which are soluble in the mineral oil to be used and also some ingredients insoluble in the mineral oil, the organic liquid being also soluble in the mineral oil, contacting the resulting solution with an adsorptive clay and separating the clay, then incorporating the extractive in the mineral oil.

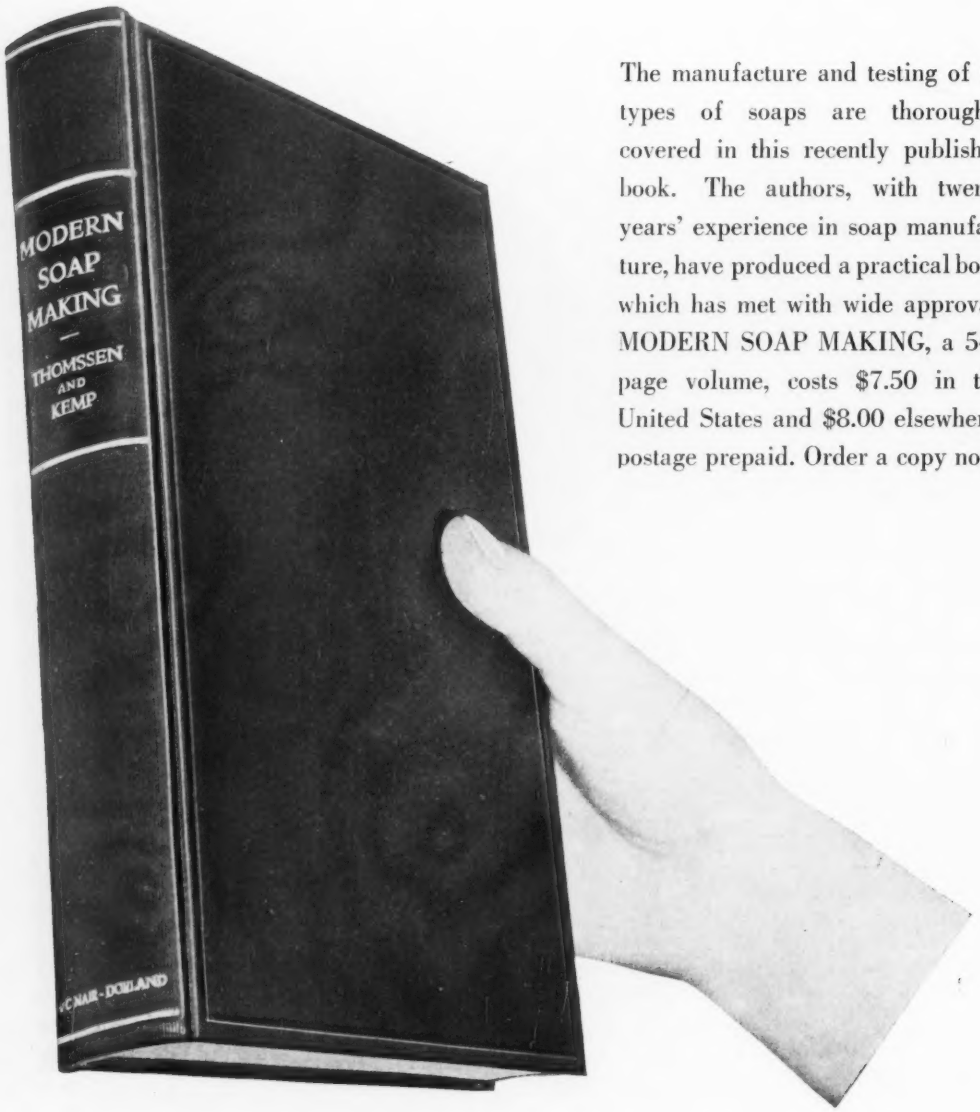
No. 2,096,947, Insectidal Oil Spray, Patented October 26, 1937 by Vanderveer Voorhees, Hammond, Ind., assignor to Standard Oil Company, Chicago, Ill. An insecticidal oil spray which comprises a petroleum oil having a viscosity of about 40 to 100 seconds Saybolt at 100°F. in combination with about 2% to 10% of a high molecular weight alcohol containing at least 12 carbon atoms.

Test for Soap-wrapping Paper

The following method is proposed: Tear 3 grams of paper into pieces 0.25-0.5 inch square, boil for 5 minutes with 50 cc. of water in a 250-cc. Erlenmeyer flask, decant into a 100-cc. graduate, boil the paper again for 5 minutes with 50 cc. more of water, decant into the same graduate, wash the paper with water to make the total volume of the extracts to 100 cc. and add 25 cc. of *N* sodium hydroxide solution. Let stand at least 5 minutes, filter, and match the color of a 50-cc. aliquot with that of standards prepared by adding 0.1 cc. of 1 per cent Congo red to 50 cc. of potassium dichromate solution containing 0.25 gram per liter, and diluting 0.2, 0.5, 1.0 cc. etc. to 50 cc. State results as the number of cc. of potassium chromate-Congo red solution required to match the tint of the paper extract.

Papers requiring more than 3 cc. will give a marked stain with 1.0 per cent sodium hydroxide in the drop test. Rosin sizing has little or no effect on the staining of soap wrappers. Vegetable parchment requires a finer subdivision of the sample; it generally gives low figures by 2 cc. or less. Waxed papers give trouble if the wax is not first completely removed by extraction. T. Lindsey Crossley. *Tech. Assoc. Papers* **20,** 208-9 (June, 1937).

Every soap manufacturer needs a copy of this newest book!



The manufacture and testing of all types of soaps are thoroughly covered in this recently published book. The authors, with twenty years' experience in soap manufacture, have produced a practical book which has met with wide approval. MODERN SOAP MAKING, a 540 page volume, costs $7.50 in the United States and $8.00 elsewhere, postage prepaid. Order a copy now.

MAC NAIR-DORLAND CO., *Publishers*

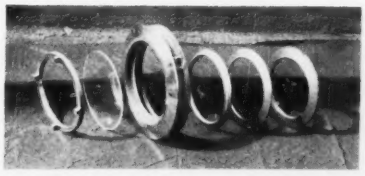
254 WEST 31st STREET NEW YORK CITY

New Equipment

IF YOU want additional information on any of the items described below or if you want any of the bulletins, catalogs, etc., write to the MacNair-Dorland Co., Inc., 254 West 31st St., New York, mentioning the number of the item.

414—Sight Glass for Kettles

Littleford Bros., Cincinnati, have just completed a sight glass for kettles which they say can be kept free from fog. This is accomplished



by a fine spray of water—32 lbs. pressure is ample—upon the under side of the glass. The glass is of Pyrex in a nickel frame, 8 inches in diameter. The frame contains a circulating water chamber with a side inlet for the water connection. Two beveled rings or large washers are clamped in place on the under side of the glass. These washers have serrated faces, providing fine channels from which the water is sprayed. When the kettle attendant wants to look into the kettle, he turns on the water pressure for an instant, looks in, then turns off the spray. It is applicable to kettles in industries where water falling from the glass into the kettle is not objectionable.

415—New Model Sprayer

Dobbins Manufacturing Co., North St. Paul, Minnesota, has added a new model to its line of sprayers. This new "Bighead" model of 3½ gallon capacity provides a large opening for filling and cleaning. A feature of the sprayer is the high pressure unit pump equipped with a self-lubricating pressure seal valve plunger that is said to develop more air per stroke than other sprayer pumps now on the market. Literature regarding the "Bighead" model may be obtained by writing the manufacturer or the publisher of *Soap*.

417—New "All-Purpose" Filler

Triangle Package Machinery Co., Chicago, has just announced a new addition to its line of fillers. The new filler, it is said, has a range of ¼ oz. to 24 ozs. per discharge, and one measuring cup, allowing for wide flexibility and quick adjustment. It is equipped with an agitator to feed powdered materials, and mechanical scrapers to prevent escape or accumulation of material on the measuring plate. It will handle powders, granules, seeds, etc., and fill any style container.

Publications

418—Belt Conveyor Catalog

Stephens-Adamson Mfg. Co., Aurora, Ill., has just issued a catalog of belt conveyors and bucket elevators. Blanks listing information required for estimating belt conveyors are included. Copies available on request.

419—Press Frame Booklet

Lukenweld, Inc., Coatesville, Pa., has just issued an 8-page booklet describing the properties and structure of non-deflecting, continuous welded frames which they design and build for hydraulic presses. Copies available on request.

420—New Washburn Book

T. F. Washburn Co., Chicago, manufacturer of floor wax and floor treating products, has just published "Modern Floor Maintenance for 1938," a 52 page illustrated book for jobbers and distributors. The new book contains information regarding new developments in the floor finishing field as well as information on the standard products which have been sold in previous years. Copies of the book may be obtained by writing the manufacturer or the publishers of *Soap*.

422—Liqui-Glove

Henry A. Nachtrieb, Clayton, N. M., is issuing a descriptive circular with sample tubes of his product, "Liqui-Glove." Available on request.

424—New House Magazine

Van Dyk & Co., Jersey City, N. J., have begun publication of a new house organ, *Progressive Perfumery and Cosmetics*, an 8-page monthly which will be sent without charge to manufacturers and others engaged or interested in the production of soaps, perfumes, cosmetics, and allied products. The first issue carries an article on "lipstick dermatitis" and what can be done about it.

The Newer Detergents

(*From Page* 30)

widely vary the results obtained. Perhaps as much interest has not been given to the commercial exploitation of the readily available cetyl compounds as in the case of the less readily available compounds. It would appear that, at certain temperatures, cetyl sulfate may be a very efficient detergent. One series of tests, on insecticides, indicates that sodium lauryl sulfate is a better emulsifier than the oleyl compound, but that the oleyl sulfate is better than the corresponding stearyl compound.

As might be expected from our knowledge of soaps, the properties of the unsaturated oleyl (C_{18}) alcohol sulfate and sulfonate do not fall in line with those of the corresponding saturated alcohol compounds. Sodium oleyl sulfate is much more soluble than the corresponding stearyl (C_{18}, saturated) compound. Solutions containing one to two per cent of the oleyl compound are clear at room temperature and even fifteen per cent solutions are clear at 50°C. (120°F.).

Sodium lauryl (C_{12}) sulfate solutions are also clear at room temperature, but the longer chain compounds do not give clear solutions of detergent strength at room temperature. The resistance of the oleyl compounds to hard water is similar to that of the lauryl compound, instead of the stearyl product. It has been stated that sodium oleyl sulfate is a better wetting agent than the corresponding lauryl compound, and that both of these are better wetting agents than either coconut oil soap or sodium stearyl sulfate. It is possible that these tests were made at fairly low temperatures and that the results, particularly as regards the stearyl compound, may be somewhat different at 100°C. (212°F.).

As the temperature of the bath is increased, the efficiency of the longer chain sulfate increases and sometimes surpasses, especially above 50°C. (122°F.), that of the shorter chain sulfates. In fact, the efficiency of the short chain fatty alcohol sulfates appears to decrease slightly at the higher temperatures, but this decrease is not serious below the boil (100°C. or 212°F.). As might be expected, the shorter chain compounds appear to be more soluble in strongly alkaline solutions, particularly at low temperatures; and soluble in solutions of higher alkalinity at low temperatures, than the corresponding longer chain compound. This is similar to the solubility properties of our ordinary soaps. It has been stated that the alcohols above C_{18} are too insoluble for use as detergents.

Relation to Hard Water

IN the same way, the resistance of the fatty alcohol sulfates and sulfonates to the alkaline earths, particularly the calcium salts, varies somewhat with the length of the hydrocarbon chain, the calcium resistance decreasing as the length of the carbon chain increases. However, the hard water resistance of even the stearyl (C_{18}) compounds has been found quite satisfactory for practical purposes. The oleyl compounds have a resistance to hard water similar to that of the lauryl compounds, and superior to that of the stearyl compounds.

It has been stated that the solubilities of the calcium and magnesium cetyl and stearyl sulfates are very similar, but that of the corresponding myristyl compound is at least six or eight times as great, while calcium lauryl sulfate is about ten times as soluble as the myristyl compound. Calcium decyl (C_{10}) sulfate is almost a hundred times as soluble, and the octyl (C_8) sulfate is more than a hundred times as soluble as the lauryl salt. Both octyl and decyl alcohols are present in technical lauryl alcohol from the reduction (hydrogenation) of coconut oil. The solubility of the calcium salts increases rapidly with rising temperatures. One authority believes that in a few cases the pure magnesium salts may be even better detergents than the corresponding sodium compounds.

It is claimed that the sulfonates of the unsaturated higher fatty alcohols (oleyl) disperse and dissolve the calcium soaps much more quickly than do the corresponding sulfates, or the fatty amide products (Igepons). Also, that the sulfonates of the saturated alcohols have considerably less dispersing action on the lime soaps than the corresponding compounds of the unsaturated alcohols. None of these products will "dissolve" or disperse filtered and dried lime soaps. The salts of iron, lead, aluminum and tin are less soluble than those of the alkaline earths.

Sulfates and Sulfonates

THERE has been some confusion among users, as well as in some of the literature, regarding the distinction between the corresponding sulfates and sulfonates. As the names imply, the sulfates are the true esters of the corresponding higher fatty alcohols, wherein the sulfur atom of the acid group is united to the end carbon of the alcohol, through an oxygen linkage, as —C.O.SO_3Na. The sulfonates are true sulfonates, wherein the sulfur atom of the acid group is linked directly to a carbon atom at one end of the fatty acid chain, as —C.SO_3Na.

Considering the very similar composition of the corresponding higher fatty alcohol sulfate and sulfonate compounds, one might be led to believe that they would have very similar wetting and detergent properties. Both the sulfate and sulfonate compounds split up into anion-active products in aqueous solution, and they do have very similar effects upon the surface tension of their aqueous solutions, but this similarity is not maintained as regards detergency.

The efficiency of the higher fatty alcohol sulfates and sulfonates, and that of many of the other more or less related alcohol and other wetting and detergent agents, varies widely with the particular compound under consideration and the conditions under which it is tested or used. For example, certain products are much more effective on cotton than on wool materials, while in other cases, with compounds of the same general type, there is less difference in detergent efficiency. All of the effective or really useful higher fatty alcohol compounds, and almost or quite all of the other newer synthetic wetting, emulsifying, and detergent agents, as well as the older natural products, are of high molecular weight. Many of these, especially the newer synthetic products, including the higher fatty alcohol compounds, have a decided substantive affinity for certain fibers, particularly wool and silk in acid baths, so that a dilute detergent bath may soon become more or less exhausted. This may, to some degree, account for the lower efficiency of the sulfonates, as compared with the sulfates, in certain cases and will be considered under "substantivity."

(The third article of this series to appear in the January issue of SOAP *will deal with the efficiency of the newer detergents under various conditions of use, and a comparison of the efficiency of the different types, as well as a brief discussion of the lines along which future developments will follow. A list of newer detergents by commercial trade names will also be included.—The Editors.)*

Sanitary Products SECTION

A Section of "SOAP" dealing with

Insecticides • Disinfectants • Moth Products
Floor Products • Polishes • Chemical Specialties

We'll be on hand to propose a toast to you at the Annual Meeting of the National Association of Insecticide & Disinfectant Manufacturers on December 6 and 7 at the Hotel Biltmore, New York. Gentlemen, the pleasure is ours.

Fly Sprays ~~"ROSES~~ *in* DECEMBER"

Though the nation's humming "Roses in December," we're warbling "Fly Sprays in December" to all insecticide manufacturers whose fly sprays need sales-tuning.

Take a little time out this month for experimentation with a view towards injecting new Odor Personality into your fly sprays. In this noble adventure may we offer these suggestions:

▲

For Sprays Packed in Glass—Kerospray Vanilla because it's soluble, has excellent covering power and is low-priced per pound.

For Users of Lethane—Perfume Oil Sweet Grass used in a proportion of 1 ounce for 16 gallons to neutralize the Lethane odor, then your choice of any number of excellent M M & R odors to actually give the desired odor to the spray. A highly effective method worthy of your experimentation.

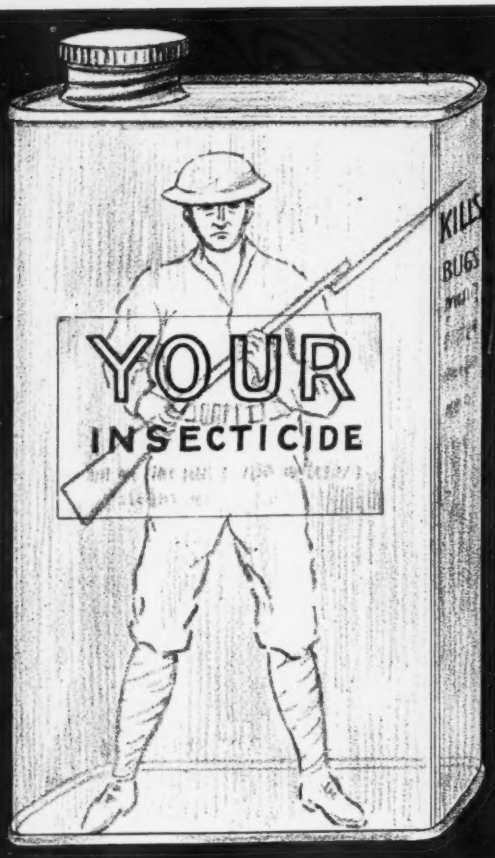
For Users of Kerosene–A wide range of performance-tested odors plus several new odors of distinctive character.

For All Insecticide Manufacturers—The offer of the eager service of our perfuming experts to aid you in your problems. For best results discuss your requirements with our chemists.

MAGNUS, MABEE & REYNARD, INC.

QUALITY ESSENTIAL OILS, BALSAMS AROMATIC CHEMICALS, ETC...SINCE 1895

32 CLIFF STREET M&R MAGNUS **NEW YORK, N. Y.**



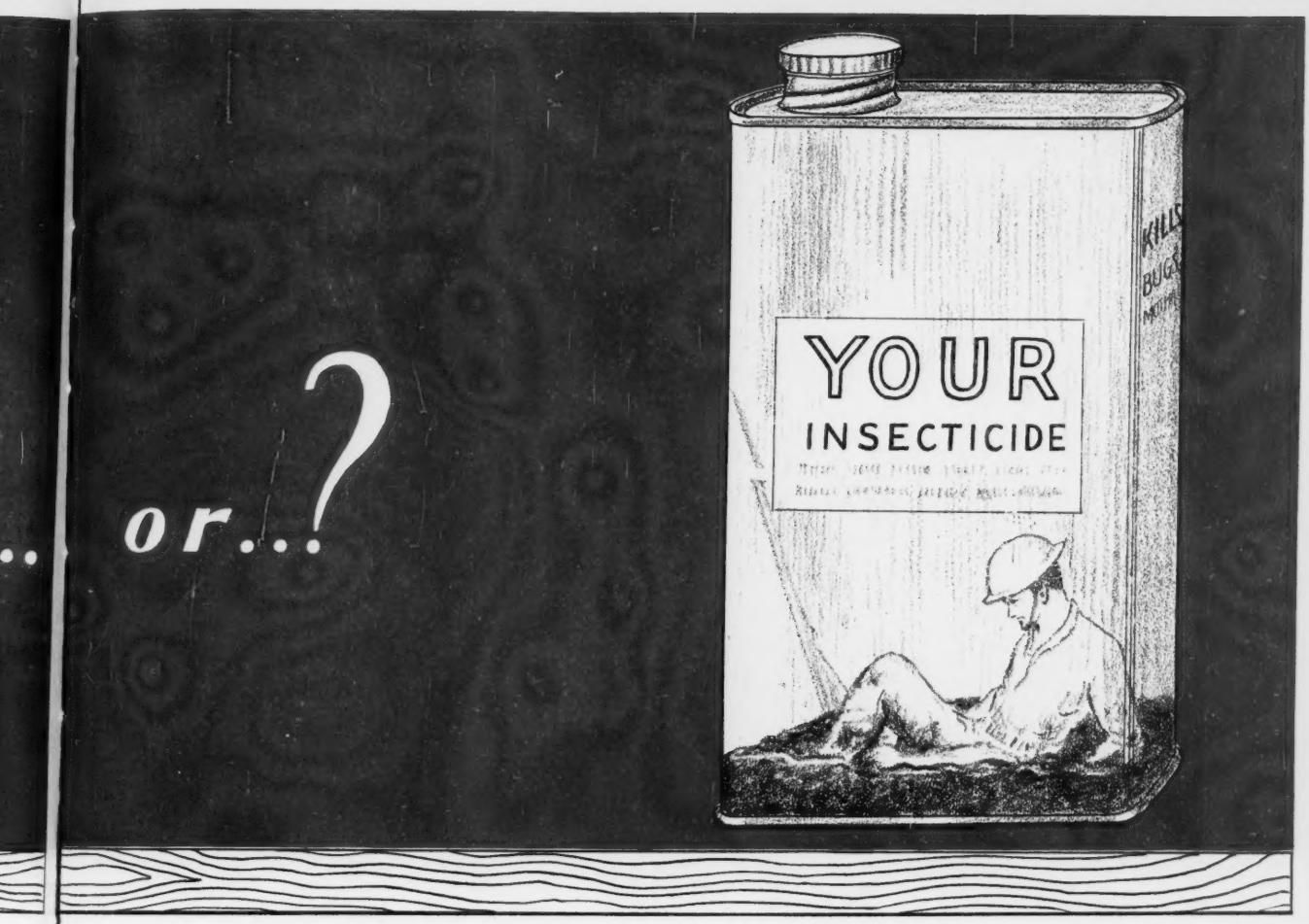
Does your product STAND UP *in the can?...*

YOUR finished insecticide may be the fastest selling brand in its market. Yet it is possible that, because of faulty stock rotation on the part of the dealer, some packages of your product may stand idle for a prolonged period.

Can it do this safely?

Your sale is an "incomplete pass" if your product does not reach the consumer in good condition. And your security lies in the selection of the finest basic materials.

JOHN POWELL



NOT only do POWCO BRAND BASIC PYRETHRUM EXTRACTS give you effective killing power, they provide stability for your finished product.

Made by cold, direct extraction—a selective, *natural* process, —POWCO BRAND extract reaches you free from superfluous impurities, assuring you of lasting dependability.

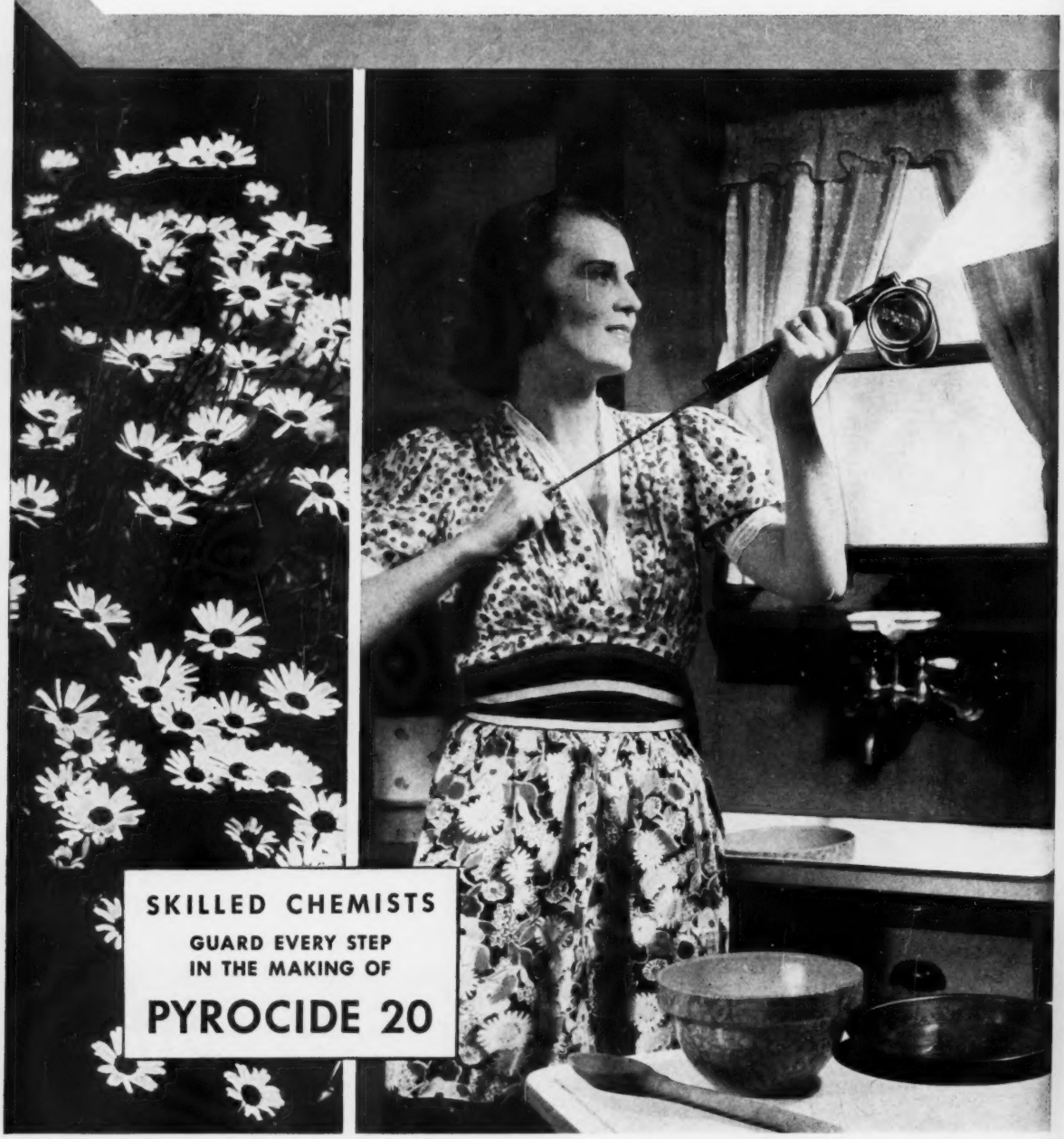
In the final analysis, one positive thing *must* be in your can at all times . . .

"Killing Power — That's the Thing!"

& COMPANY, Inc. POWCO BRAND

From Pyrethrum flowers

WE PROTECT



to your finished spray

KILLING POWER!

CHECK THESE SPECIFICATIONS

1. Pyrethrin Content: 2.5% by weight or 2 grams per 100 c.c.

2. Stabilized: Retains its strength. Stabilized with antioxidant that has been proved effective by laboratory tests and commercial use over two years.

3. Killing Power: Guaranteed equal to or better than any extract of equivalent pyrethrin content.

4. No "False Pyrethrins": Patented process removes materials which are not pyrethrins but which react like pyrethrins when assayed by the Seil method.

5. Odor: Made only with odorless base oil. Practically free from odor, except the natural floral aroma of pyrethrum. No Kerosene used in Pyrocide 20.

6. Color: A rich amber. Free from colloidal green coloring matter. The purest form of pyrethrins commercially available.

7. Clarity: Dilutes brilliantly clear with any base oil. Remains clear either in concentrated form or when diluted for use.

8. Economy: No increase in price for improved odor — improved color — improved stability — improved clarity. Requires ⅓ to ½ less perfume.

We use every precaution known to chemistry to make Pyrocide 20 a powerful killing agent

Chemists in the laboratory which we established in the Far East start protecting the killing power of Pyrocide 20 when they select only the highest test flowers.

In America, painstaking care to preserve full killing strength guides every step in processing . . . from grinding, extracting, clarifying . . . to stabilizing the finished concentrate with a proven antioxidant.

Even "false pyrethrins," materials which have no killing power, but which react like pyrethrins when assayed by the Seil Method, are removed by our patented process.

In fact, we spare no effort or expense to make Pyrocide 20 the finest killing agent available. It is deodorized . . . saving you ⅓ to ½ in perfume costs. It is shipped only in welded all-steel drums.

Yet you pay no premium for this superior pyrethrum concentrate because Pyrocide 20 comes in only one grade, the *best,* and it sells at the regular price.

If you have not already joined the hundreds of manufacturers who are making better insecticides with Pyrocide 20—investigate this improved pyrethrum extract before you contract for next season's supply. Learn now how Pyrocide 20 can improve your product at no additional cost . . . how you can actually save money by using it. Today — write for FREE illustrated booklet, "PYROCIDE, Deodorized — Clarified."

McLAUGHLIN GORMLEY KING COMPANY

Manufacturing Chemists • Minneapolis, Minnesota

PYROCIDE 20

THE PUREST FORM OF PYRETHRINS COMMERCIALLY AVAILABLE

MAN-POWER
Salesmen by the
They're CONTAINERS in-the-making, growing up to SELL distinguished lines. ★ Spirit and Dash! characterize "NATIONAL" designing and color treatments. ★ "NATIONAL" Packaging forces merchandise to a front line position by sheer force of attraction.
Sign up "NATIONAL" Container Salesmanship!
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LIQUID SPRAY
"NATIONAL"

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MILLIONS!
BLACK FLAG
FLYDED KILLS A ROOMFUL WHILE YOU'RE SNAPPING ONLY ONE
INSECT SPRA
KILLS
FLIES
MOSQUITOES
ANTS
ROACHES
BED BUGS
FRAGRANT AND STAINL
FLY SPR
ACTIVE INGREDIE
KILLS
MANY INS
FLY
MOTH
PLEASINGLY FRAGRANT
BLACK FLAG
SPRAY
Kills
FLIES
MOSQUITOES
MOTHS
ROACHES
BED-BUGS
FLEAS
ANTS
and many other household insects

D&O
ESTABLISHED IN 1798

"D&O" welcomes the members of the National Association of Insecticide & Disinfectant Manufacturers to the City of New York. We take this opportunity to thank our many friends in the trade for the confidence they have retained in us and in our high standard of quality since the inception of our organization in 1798. When the present year passes on we will have completed 140 years of service in the field of

Essential Oils

Our extensive line of

PETRODORS

are especially effective and useful in insecticides and disinfectants, also in masking unpleasant odors. Price from 50c per pound up.

"D & O" ESSENOL ACTIVATOR

is a compound for increasing the effectiveness of *agricultural and livestock* insecticides. Send for descriptive booklet.

Let us help you solve your problems.

DODGE & OLCOTT COMPANY

180 Varick Street **New York, N. Y.**

PHILADELPHIA : BOSTON : CHICAGO : ST. LOUIS : LOS ANGELES

"WE'RE SET FOR '38

'No Kerosene Breath'—that's what sold us on

DEO-BASE

Reg. U. S. Pat. Off.

and now it sells our entire line of household sprays to our customers."

Freedom from kerosene odor is only one of the many reasons why the Insecticide Industry has endorsed DEO-BASE since 1931. Stability, balanced fractionation, sparkling clarity and assurance against staining are some others.

Get set for *your* 1938 season with DEO-BASE—the modern base for liquid insecticides. A finished spray made with DEO-BASE can be sold everywhere, for use anywhere.

L. SONNEBORN SONS, INC.

REFINERS OF WHITE OIL AND PETROLATUM

Refineries: Petrolia and Franklin, Pa. Research Laboratories: Petrolia, Pa. and Nutley, N. J.
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STOCKS CARRIED IN PRINCIPAL CITIES

A Closed Book!

but

WHAT OF 1938?

"SOAP" reports that the 1937 insecticide season was the best on record in our history. And reporting further, states:—"If your insecticide sales did not increase at least 30% this year, perhaps you are falling behind the parade, and had better look ahead for 1938."

•

Get in line for 1938

by adopting

CEFCO UTILITY-S-ENCES

NOT JUST ODORS—BUT PERFUMES
FOR EVERY INSECTICIDE PURPOSE

CHARLES FISCHBECK CO. INC.

• *Backed by Over a Quarter of a Century of Experience*

119 WEST 19TH STREET
NEW YORK

The ABC of PYREFUME Superiority

(SUPER 20 . SUPER 30)

Alert, sales-wise insecticide manufacturers are turning to Pyrefume for profit-producing household sprays.

If you are among those who have not as yet tried Pyrefume—it will pay you to do so before you lay in your 1938 supply of pyrethrum extract. Listed here are but 7 of the many reasons for Pyrefume's superiority.

A "Knock down and kill" potency is above standard as demonstrated by physiological laboratory tests.

B Pyrethrins content of Pyrefume is guaranteed—2 grams per 100 cc. of Pyrefume 20; 3 grams per 100 cc. of Pyrefume 30 . . . proven by rigid assay after extraction.

C Stability assured through the use of freshly milled flowers and addition of special anti-oxidant, unique with Penick for many years.

D Blends clearly and perfectly with usual oil bases . . . all sediment has been removed. Stays clear.

E Stainless as a pyrethrum concentrate can be. Pour some insecticide made with Pyrefume on paper and note the difference as compared to ordinary pyrethrum extract. Waxes and resins have been removed by refrigeration.

F Singularly free from unpleasant odor. The natural fragrance of the flowers is evident, hence less perfume is required.

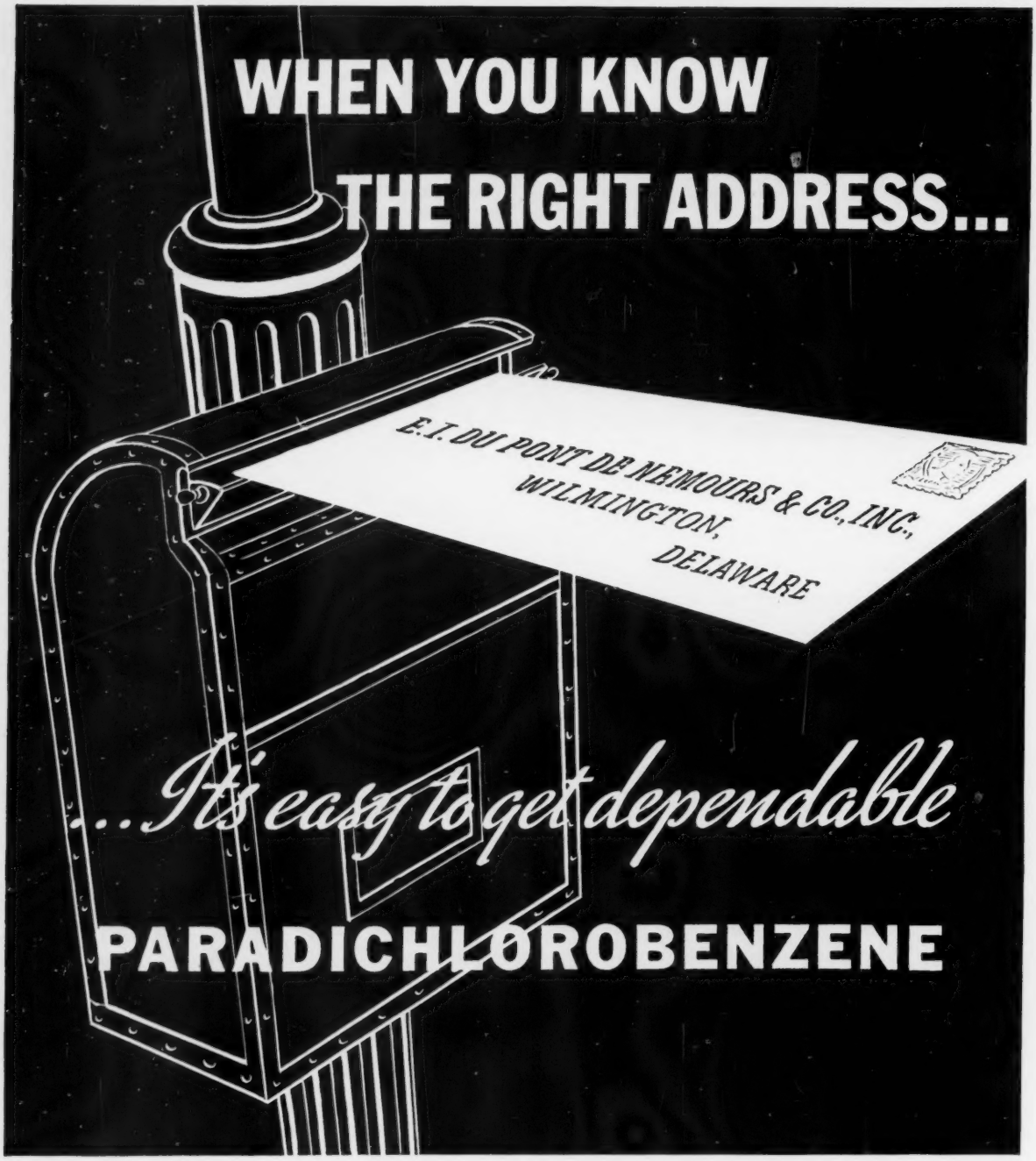
G Costs less—our wide botanical facilities and extensive purchasing power earn us savings which we pass on to you.

Concentrate on **PYREFUME** for a quality concentrate.

S. B. PENICK & COMPANY

132 NASSAU STREET, NEW YORK — 1228 W. KINZIE STREET, CHICAGO

THE WORLD'S LARGEST BOTANICAL DRUG HOUSE



When you order paradichlorobenzene from du Pont you can be sure it will meet your specifications. It is always pure, white, and uniform in quality. Available in four different granulations to suit your requirements. Ample stocks assure you of prompt delivery, even at short notice.

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We Don't Want To

"just take your order"

PRENTISS PRODUCTS
for the
INSECTICIDE MANUFACTURER

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PYRETHRUM
Ground for Percolation
Fine Powder
No. 20 Concentrate

•

DERRIS and CUBE
Fine Powder
Ground for Percolation
Minimum 4% and 5% Rotenone and with high content of total active extractives

•

PRENTOX CONCENTRATES
(based on active Derris extractives)
for
Household Fly Sprays
Live Stock Sprays
(both Oil and Water types)
Flea Soaps
Bed Bug Liquids
Horticultural Sprays
Mill and Warehouse Sprays

PRENTISS policy has always leaned toward the theory that our representatives have no right to the time of a prospective buyer unless they are in position to do something more than just take his order. Every member of the Prentiss staff knows the field of insecticidal raw materials through long experience and qualifies as an expert in their practical application. Each one is prepared to advise you on new technical developments in the field, market tendencies, state and federal regulations and other similar problems which may arise.

When in New York at the annual meeting of the National Association of Insecticide & Disinfectant Manufacturers, or at any other time, we invite you to make use of our services. We'll try to do something more than "just take your order."

R. J. PRENTISS & CO., INC.

MAIN OFFICE
100 Gold Street
NEW YORK, N. Y.

FACTORY
261 King Street
BROOKLYN, N. Y.

Announcing
Hercules D.H.S. Activator*

A BRAND NEW *compound developed especially for* HOUSEHOLD FLY SPRAYS *which have pyrethrum as the toxic ingredient. It is recommended for improving your 1938 fly spray. Here are a few advantages:*

1. **D.H.S. Activator** increases the insecticidal action of fly sprays to which it is added.
2. **D.H.S. Activator** retards the deterioration of pyrethrum.
3. **D.H.S. Activator** makes possible the manufacture of economical, high-kill insecticides.
4. **D.H.S. Activator** will not harm human beings or the higher animals.
5. **D.H.S. Activator** is easily added to your sprays.

Send the coupon for prices and further information.

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HERCULES POWDER COMPANY
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961 Market Street, Wilmington, Delaware

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DID YOUR FLY SPRAY SALES MEET EXPECTATIONS THIS YEAR?

Retail buyers insist on a fly spray entirely free from disagreeable odor. If the odor of your product has been inadequately neutralized . . . if your product is poorly perfumed . . . if it lacks "fragrance appeal," it has probably failed to fulfil sales expectancy.

Satisfactory sales depend on the selection of appealing fragrance. You need SPECIAL fragrances . . . clean, "outdoor" odors that seem to actually clear the air.

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IS THE TIME TO IMPROVE YOUR PRODUCT FOR NEXT YEAR'S BUSINESS . . .

Use

BOUQUET TOX No. 30
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These four selections are adequately diverse in proven appeal, and sufficiently economical in cost to meet every requirement.

WRITE US TODAY FOR WORKING SAMPLES AND PRICES!

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ALMOST A QUARTER CENTURY....

NEXT year, the National Association of Insecticide & Disinfectant Manufacturers will hold its 25th annual meeting. (Its current 24th annual meeting is in session at the Hotel Biltmore, New York, December 6 and 7.) Almost a quarter-century of trade association activity,—during which time the insecticide, disinfectant, and allied sanitation products industries have grown from a mere handful of manufacturers to a group of national prominence. The part which the National Association has played in this development has been noteworthy. Today it lists among its members **most** of the leading firms in the industries which it serves. If your firm is not a member, why not investigate the advantages of lining up with the progressive group which makes up the membership? The office of the Secretary will be glad to give you further details.

▼

National Association of
Insecticide & Disinfectant Manufacturers, Inc.

122 East 42nd Street — New York

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First Vice-President ..... Vacant
Second Vice-President ..... J. L. BRENN, Huntington Laboratories, Inc., Huntington, Ind.
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INSECTICIDE SPRAY PERFUMES

Now is the time to thoroughly check insecticide spray perfumes. Experimenting now will save a good many headaches after the production season gets under way. We have developed perfumes which have met with considerable approval throughout the industry. They have been generally accepted as being unusually efficient and economical. We call them Oxenes—and they are available in these four types:

MIMOXENE
VEROXENE
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LILOXENE

They are equally effective in Pyrethrum or Lethane sprays. One ounce perfumes five gallons of your product. Do you want generous working samples?

P. R. DREYER INC.

12 EAST 12th STREET NEW YORK CITY

MORE and more successful insecticide manufacturers are choosing Atlantic Ultrasene for their spray-base.

The reasons are quite clear. Atlantic Ultrasene is refined solely for use as a carrier for insect killers. Unlike a kerosene base, Ultrasene evaporates readily. It leaves no disagreeable odor, no oily residue. Very naturally, proprietors of restaurants, markets, hotels are well aware of Ultrasene's advantages. Very naturally, they are insisting upon Ultrasene-base insecticides.

Find out more about Atlantic's increasingly popular spray-base. Our technical department will help you with further information and liberal experimental samples. The Atlantic Refining Co., Specialty Sales Dept., 260 South Broad Street, Philadelphia, Pa.

ATLANTIC ULTRASENE

A BETTER BASE FOR BETTER INSECTICIDES

A colorful, well designed container often paves the way to the securing of new outlets in the distribution of an old product.
To the manufacturers who would explore this possibility, Continental offers a complete service which includes research, design and package development.
Baker's
STOCK SPRAY
AIDS IN KILLING AND REPELLING STABLE AND HORN FLIES
CONTENTS ONE GALLON
MANUFACTURED BY
S.F. BAKER & CO.
KEOKUK, IOWA
FRAGRANT
STAINLESS
WIZARD
HOUSEHOLD
FLY SPRAY
KILLS
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MOSQUITOES
ROACHES-FLEAS
BED BUGS
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LARVEX
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Kills
Moths
Mosquitoes
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Bed Bugs
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Flit spray will not stain
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NEW YORK
CHICAGO
SAN FRANCISCO

....here is the base for your 1938 model odorless insecticide • crystal clear

This is a sample of a batch of INSECTI-SOL manufactured almost *two years ago* and kept during the entire time in a plain glass bottle. Still completely odorless and crystal clear.

INSECTI-SOL

The Perfect Insecticide Solvent

.....permanently odorless.....

MORE than ever before, the demand for liquid household insecticides in 1938 will require the use of an odorless base . . . INSECTI-SOL, the crystal clear, permanently odorless insecticide base meets the most exacting requirements of insecticide manufacturers . . . and meets them at competitive prices . . . so let us tell you more about INSECTI-SOL so that you can consider adopting it for your 1938 product . . . ask us for samples and prices.

WE ARE ALSO REFINERS OF
White Oil U. S. P. MEDICINAL AND TECHNICAL
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PENNSYLVANIA REFINING CO.

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Season's Greetings

While You Are In New York

We invite the members of the National Association of Insecticide and Disinfectant Manufacturers to visit our offices at 315 Fourth Avenue in New York City.

A fifteen minute conference can do more than months of letter writing. Let us show you, in our laboratories, what we can do for your insecticide.

VAN AMERINGEN - HAEBLER, INC.

315 FOURTH AVENUE, NEW YORK CITY

CHICAGO TORONTO SEATTLE PORTLAND LOS ANGELES
SAN FRANCISCO ATLANTA SALT LAKE CITY Factory: ELIZABETH, N. J.

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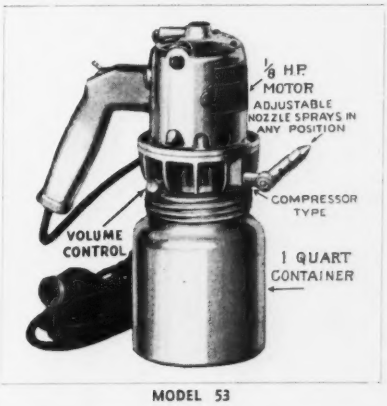
START 1938 RIGHT · WITH THE FINEST GROUP OF AUTOMATIC ELECTRIC SPRAYERS EVER BUILT!

1/3 H.P. G.E. MOTOR
TIME SWITCH OPERATES 1 TO 45 MINUTES AUTOMATIC SHUT OFF
ADJUSTABLE NOZZLE SPRAYS IN ANY POSITION
VOLUME CONTROL FINEST DIFFUSING WITH WARM AIR
COMPRESSOR TYPE
1 GALLON CONTAINER

MODEL 36

ADJUSTABLE NOZZLE SPRAYS IN ANY POSITION
TIME SWITCH OPERATES 1 TO 45 MINUTES AUTOMATIC SHUT OFF
VOLUME CONTROL FINEST DIFFUSING WITH WARM AIR
1 QUART CONTAINER

MODEL 54



MODEL 53

PUT IT TO THIS TEST

Do the sprayers you are using spray heavy drops—or break the insecticide up into a fine gas formation to give a dry spray like that produced only by Breuer's Tornado Electric Sprayers?

To get real results from your insecticide, use the Model 36, 53, or 54 Compressor Type Sprayers with exclusive volume control. Greater efficiency and longer life of these sprayers will make more profit for you in repeat orders and increased business. Build better business with Tornado quality!

MODEL 36 Our largest sprayer combines automatic time switch, volume air control, one gallon capacity, 1/3 H.P. G. E. Universal Motor among its features. Sprays large volume great distance in finest gas formation. Penetrates every possible source of insect existence.

MODEL 54 This model is exactly like the Model 36 except for smaller capacity. 1/8 H.P. G. E. Motor with only one quart container. Also, like the Model 36, sprays desired amount of insecticide and then shuts off. Time switch may be set one to thirty minutes.

MODEL 53 Exactly like the Model 54 except that it has no automatic time switch. Adjustable for fine or heavy spray. As with all Tornado Sprayers, the patented principle of heating and compressing material does the trick.

Write for latest bulletins.

BREUER ELECTRIC MFG. CO.

862 Blackhawk St. **Chicago**

We do not sell insecticides. Our business is manufacturing sprayers.

Ertel Engineering Corporation extends a cordial invitation to members of the National Association of Insecticide and Disinfectant Manufacturers and other readers of Soap to visit the Ertel exhibit (Booths 508-509) at the 1937 Exposition of Chemical Industries. Some of the latest developments in liquid handling equipment will be on display.

FRED J. K. ERTEL
President.

We shall be glad to supply additional admission tickets for the exposition on request.

Refreshing

IS THE WORD FOR

KEROZONE

KEROZONE is Givaudan's latest development in fly spray deodorants. It has the wholesome character that one associates with clear, clean country air. *Refreshing* is the word for KEROZONE!

KEROZONE has excellent covering power. From ⅛ ounce to ¼ ounce per gallon of finished spray is effective when ordinary kerosenes are used. For sprays having the odorless type of hydrocarbon distillate as the carrier, as little as 1/16 ounce to the gallon of finished spray gives splendid results.

If you'd like to give your fly spray an odor that is entirely new and different . . . and at the same time inexpensive—write us for samples and information on KEROZONE.

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This Man

MAKES *the* DIFFERENCE

in SHERWOOD INSECTICIDE PRODUCTS

HE is many men. His combined insecticide experience totals hundreds of years. His knowledge is the knowledge of experience and science. He knows the raw materials and the equipment with which he works. He is careful in planning and faithful in production. And, to guarantee the Sherwood guarantee, he tests every product during and after manufacture. He . . . these many Sherwood men . . . is responsible for the satisfaction of Sherwood customers—customers who buy the products listed here, sure that their quality is as dependable as sunrise, that their killing power is as certain as nightfall.

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SHERWOOD

PETROLEUM COMPANY

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Main Office:
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SPRAYSENE

The scientific insecticide base. Entirely free from kerosene odor. Gives best dispersion for highest kill. Conforms to N.A.I.D.M. specifications for Peet-Grady Test Distillate.

DI-BUG PYRETHRUM PRODUCTS

- Di-Bug Japanese Pyrethrum Flowers—coarse ground for percolation.
- Di-Bug Finest Japanese Impalpable Pyrethrum Powder.
- Di-Bug Pyrethrum Extracts No. 30, No. 20 and No. 5—guaranteed for minimum pyrethrin content according to Dr. Seil's assay.
- Di-Bug Steam-O-Cide for Steam and Electric Sprayers.

DI-BUG DERRIS PRODUCTS

- Di-Bug Rotenone, C.P.
- Di-Bug Rotenone, Technical, 50% to 60%.
- Di-Bug Cube Root Powder, 4% and 5% Rotenone Content.
- Di-Bug Derris Root Powder, 4% and 5% Rotenone Content.
- Di-Bug Derris Root Resins, 25% Rotenone Content.
- Di-Bug Rotenone Solution 1% and 2% Rotenone Content.
- Di-Bug High Kill Agricultural Spray.
- Di-Bug Concentrated Liquid Derris Extract (Acetone or Camphor Oil Extractions).

HUDSON SPRAYERS

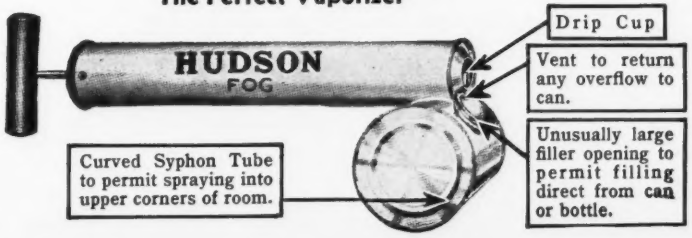
How Did They Vote on YOUR Product in 1937?

American housewives may not go to the polls to elect the insecticide they like best. But the word has a way of getting around. How do you stand in popular demand?

Make It the People's Choice in 1938!

Since proper application is so important to the success of your fly spray, why not be *sure* of it? You can—by supplying genuine Hudson Fog Sprayers *with* your product. It's the perfect sprayer for household use, because it turns fly oils into a finely atomized mist that remains suspended in the air—kills flies on the wing. And that's how the housewife rates your fly spray.

HUDSON FOG SPRAYER
The Perfect Vaporizer


HUDSON
FOG
Drip Cup
Vent to return any overflow to can.
Unusually large filler opening to permit filling direct from can or bottle.
Curved Syphon Tube to permit spraying into upper corners of room.

It's high time to prepare for fly time in 1938. If you didn't show a good sales increase in 1937, start looking for the trouble. Hudson can help you in all matters of insecticide application. There's no cost—no obligation. Just write us.

"A Hudson Sprayer for Everybody—Everywhere"

H. D. HUDSON MANUFACTURING COMPANY
589 E. ILLINOIS STREET :: CHICAGO, ILLINOIS

One of the real joys of yuletide is the opportunity to put aside the routine and customs of everyday business and in real sincerity offer season's greetings to all our friends.

Baird & McGuire Inc.

SANITARY PRODUCTS

A Section of SOAP

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

MORE serious attention to the quality of their liquid insecticides is of necessity going to be given by many manufacturers in 1938. No great powers of perception are required to read the hand-writing on the wall,—the hand-writing of the Food & Drug Administration. Sub-standard insecticides are going to be brought up to standard or they are likely to be the objects of Government attention, the kind of attention which no manufacturer likes to receive. So why wait, and why take chances? The time for manufacturers who are skimping on active ingredients,—and there are many who do just this,—to mend their ways, is now. The time for the manufacturer who puts out a wholly untested product, — and this class, we will gamble, represents the great majority of the industry,—to arrange some type of accurate check on his insecticide, is right now. A plain warning has been issued, and irrespective of side issues, it should be heeded in the interest of good business, good sense, and the good of the whole industry.

FROM the Connecticut State Experiment Station comes a particularly good booklet on household insect control. On the whole, it is above criticism until we get down to the part where the composition of household insect sprays is discussed. Then, the authors fall into the same error which about every experiment station in the country has made at some time or other in telling the farmer how to make a fly spray. As we have said a dozen times before, the farmer is not able to make a decent fly spray,—that is unless, he wants to build a plant on his premises for the purpose. There are a dozen reasons why any homemade fly spray is unfit for the purpose for which it is made. It is invariably inefficient, dirty, and sometimes even dangerous. From the angle of the farmer's good,—economy and plain common sense, it is wrong to recommend that he make his own household insecticide, because he is unable to make a really useable product. We were not greatly surprised at noting such recommendations from some state experiment stations, but when Connecticut does the same thing, we are quite amazed.

THE quality of the pyrethrum flowers which Japan is shipping to the United States this year is the poorest on record. The toxicity of the material is very low, and therein lies the danger to insecticide manufacturers who do their own extracting. To manufacture a liquid insecticide of standard strength wherein a pound of pyrethrum per gallon of 0.9 per cent pyrethrins might ordinarily be used, up to nineteen or twenty ounces of this year's pyrethrum may be required.

The combination of circumstances, — low toxicity pyrethrum and the initiation of Government activity in policing insecticide quality standards,—may bring all sorts of woe to the manufacturer who is not alert to the dangers of the present pyrethrum situation. More than ever before, the insecticide manufacturer is going to have to know his business and keep his wits about him in 1938.

Officers for 1937—

National Association of Insecticide and Disinfectant Mfrs.

W. B. EDDY
Rochester Germicide Co.
President

J. L. BRENN
Huntington Laboratories
Vice-President

JOHN POWELL
John Powell & Co.
Treasurer

JOHN H. WRIGHT
Secretary

Insecticide—Disinfectant Meeting in New York

THE 24th annual meeting of the National Association of Insecticide & Disinfectant Manufacturers is being held in New York at the Hotel Biltmore, December 6 and 7. Special meetings of important committees and also of the Board of Governors were held on Sunday, December 5, preceding the regular meeting. The annual convention which is being addressed by a number of prominent speakers on both scientific and commercial subjects, will run for two days, closing with the annual informal beefsteak dinner on Tuesday evening, December 7 at the Biltmore. Group luncheons are being held each day.

Some of the more important subjects coming up for discussion include possible widespread prosecution by the Food and Drug Administration of insecticide manufacturers for sub-normal fly sprays, possibilities of licensing of insecticide and disinfectant manufacturers by the Federal Government, specifications for insecticides and disinfectants, and allied sanitation products, new scientific developments of the past year including suggested changes in testing procedure, and insecticide labeling.

Among the leading speakers will be: Lee Bristol of Bristol-Myers Co., New York, on "Control of Advertising as Applied to Insecticides"; Prof. W. C. McTavish of New York University on "Some Observations on Mothproofing Materials"; W. D. Lewis of the National Hotel Management Co., New York, on "Hotel Sanitation and Insect Control"; Dr. E. G. Klarmann of Lehn & Fink, Inc., Bloomfield, N. J. on "Scientific Advances in Disinfectants and Antiseptics during 1937"; F. W. Reynolds of the National Bureau of Standards, Washington, on "Insecticides and Disinfectant Standards"; Dr. R. C. Roark of the Bureau of Entomology and Plant Quarantine, Washington, on "Is Cube Equal to Derris as an Insecticide?"; Dr. F. L. Campbell of Ohio State University on "A Preliminary Report on Methods for Testing Insecticides against Crawling Insects"; Arno Viehover of the Philadelphia College of Pharmacy and Science, Philadelphia, on "New Effective Organic Insecticides"; Dr. W. A. Simanton of the Gulf Research & Development Co., Pittsburgh, on "A Modification of the Peet-Grady Method Enabling Greater Speed and Accuracy"; C. A. Murray of the Baldwin Laboratories, Inc., Saegertown, Penna., on "Relation of Dosage and Mortality in the Peet-Grady Procedure of Evaluating Liquid Insecticides"; W. J. Zick of Stano, Inc., New York, on "Labeling Fly-Sprays in California"; and L. S. Hitchner, president of the Agricultural Insecticide and Fungicide Association on "A Proposed Model Insecticide and Fungicide Law."

Presiding at the various sessions of the meeting are W. B. Eddy of the Rochester Germicide Co., Rochester, N. Y., president of the Association, and J. L. Brenn of the Huntington Laboratories, Inc., Huntington, Ind., vice-president. The committee in charge of general convention arrangements is headed by John H. Wright, secretary. John Powell of John Powell & Co., New York, is in charge of finances and hotel arrangements. H. W. Hamilton of the White Tar Company, Kearny, N. J. heads the program committee. L. J. LaCava of the Continental Can Co., New York, is chairman of the entertainment committee, assisted by Joseph B. Magnus of Magnus, Mabee & Reynard, Inc., New York.

In addition to group luncheons, the entertainment committee has arranged for a group attendance at the Exposition of Chemical Industries which is being held in New York, Dec. 6 to 11, by adjourning the afternoon session on Monday, Dec. 6 at 4:30 P.M. and going in a body to the Grand Central Palace where the Exposition is being held. Preceding the annual dinner to be held on Tuesday evening, a cocktail party is being given by L. J. LaCava, chairman of the committee.

Most of the important addresses on the program will be published in the next issue of *Soap* in full. The program follows:

Program

24th Annual Meeting

MONDAY—DECEMBER 6, 1937

W. B. Eddy, Presiding

9 A.M.—Registration—Music Room Foyer
Meeting called to order by President W. B. Eddy, Rochester Germicide Co., Rochester, N. Y.
Announcements
"Meet Our Industry"—President W. B. Eddy
Appointment of Committees.
Report of Committee on Time and Place of June 1938 Meeting—J. L. Brenn, Huntington Laboratories, Inc., Huntington, Ind., Chairman of Committee
Report of Treasurer—John Powell, John Powell & Co., Inc., New York.
"We Need Help"—A. L. van Ameringen, van Ameringen-Haebler

Governors for 1937—

National Association of Insecticide and Disinfectant Mfrs.

H. M. Clark
Dr. Hess & Clark, Inc.

R. H. Young
Davies-Young Soap Co.

H. W. Hamilton
White Tar Co.

H. A. Nelson
Chemical Supply Co.

N. J. Gothard
Sinclair Refining Co.

Dr. Robert C. White
Robt. C. White Co.

Wallace Thomas
Gulf Refining Co.

W. J. Zick
Stanco, Incorporated

S. S. Selig
The Selig Company

C. P. McCormick
McCormick & Co.

Clarence Weirich
C. B. Dolge Co.

Inc., New York, Chairman of Membership Committee.

Roll Call
Selection of Nominating Committee
Report of Secretary — John H. Wright, New York.

"Legislative Trends"—Richard K. Hines, General Counsel, Vick Chemical Company, New York.
Reports of Special Committees

(1) Executive Office: H. W. Hamilton, White Tar Co. of N. J., Inc., Kearny, N. J., Chairman

(2) U. S. Department of Public Health re Disinfectants: Melvin Fuld, Fuld Brothers, Baltimore, Md., Chairman

(3) Association Constitution and By-Laws: W. J. Zick, Stanco Inc., New York City, Chairman

Report of Entertainment Committee —L. J. LaCava, Continental Can Co., New York, Chairman

Report of Publicity Committee—Ira P. MacNair, MacNair Dorland Co., Inc., New York, Chairman

Report of Sanitary Specialties Committee—C. L. Weirich, The C. B. Dolge Co., Westport, Conn., Chairman

MONDAY AFTERNOON—

DECEMBER 6, 1937

J. L. Brenn Presiding

2 P.M.—Meeting called to order
Announcements
Introduction of Guests

"Disinfectant Literature and Patents"—B. G. Philbrick, Skinner & Sherman, Inc., Boston, Mass., Chairman of Committee

"Peptone for Use in Testing of Antiseptics"—Dr. George F. Reddish, The Lambert Pharmacal Co., St. Louis, Mo., Chairman Antiseptic Committee

"Application of N.A.I.D.M. Specifications to the Problems of the Purchasing Department of the City of New York"—Dr. Stroud Jordan, Chief Standardization Bureau, Department of Purchase, City of New York.

"Scientific Advances in Disinfectants and Antiseptics During 1937"—Dr. E. G. Klarmann, Lehn & Fink Inc., Bloomfield, N. J., Chairman of Committee on Methods of Testing Disinfectants.

"Insecticide and Disinfectant Standards": Discussion Leader, F. W. Reynolds, Division of Trade Standards, National Bureau of Standards, U. S. Department of Commerce, Washington, D. C.

4:30 Adjournment: (Adjournment promptly at 4:30 P.M. to permit attendance of the membership at Chemical Exposition in Grand Central Palace. Tickets will be distributed during this session.)

TUESDAY—DECEMBER 7, 1937

W. B. Eddy Presiding

10 A.M.—Meeting called to order
Announcements

"Preliminary Report of the N.A.I.D.M. Fellowship Crawling Insects. Methods of Rearing the German Cockroach and Testing Liquid Household Insecticides Against it" —Mr. E. N. Woodbury. Introduction by Dr. F. L. Campbell, Associate Professor of Entomology, Ohio State University, Columbus, Ohio (Illustrated).

"Insecticide Standards, — Official Control Insecticide": Dr. Alfred Weed, John Powell & Co., New York, Chairman, Committee on Methods of Testing Insecticides.

"Insecticide Specifications" — H. A. Thomas, Shell Petroleum Co., St. Louis, Mo., Chairman, General Insecticide Committee. (A representative of the Insecticide Division, Food and Drug Administration, U. S. Department of Agriculture, Washington, D. C., will be present and take part in the discussion.)

"New Effective Organic Insecticides" by Dr. N. Tischler and Arno Viehoever. (Presented by Mr. Viehoever, Director of Research, Philadelphia College of Pharmacy and Science, Philadelphia, Pa.)

"Is Cube Equal to Derris as an Insecticide?" by Dr. R. C. Roark, Bureau of Entomology and Plant Quarantine, U. S. Dept. Agriculture, Washington, D. C.

"A Modification of the Peet-Grady Method Enabling Greater Speed and Accuracy" by Dr. W. A. Simanton and A. C. Miller, Gulf Research & Development Co., Pittsburgh, Pa.

"Relation of Dosage and Mortality in the Peet-Grady Procedure of Evaluating Liquid Insecticides"—C. A. Murray, Baldwin Laboratories, Inc., Saegertown, Pa.

"Insecticide Literature and Patents" —John Curlett, McCormick & Co., Baltimore, Md., Chairman of Committee.

"Labeling of Fly-Sprays in California"—W. J. Zick, Stanco Inc., New York
Report of Nominating Committee

TUESDAY AFTERNOON—

DECEMBER 7, 1937

2 P.M.—Meeting called to order
Announcements
Report of Resolutions Committee
Discussion of Proposed Model Insecticide and Disinfectant Law.

"Some Observations on Mothproofing Materials"—Professor W. C. McTavish, Chairman of the Division of Chemistry, New York University, New York.

"Control of Advertising as Applied to Insecticides" — Lee Bristol, President, Bristol-Myers Co., New York.

Disinfectant Standards and Specifications—J. L. Brenn, Chairman, General Disinfectant Committee.

Specifications—Jack Varley, Baird & McGuire, Inc., St. Louis, Mo.

Cresylic Disinfectants—Dr. E. G. Klarmann, Lehn & Fink Inc., Bloomfield, N. J.

Pine Oil Disinfectants — Melvin Fuld, Fuld Bros., Baltimore, Md.

Election of Officers
Unfinished Business

4:30—Final Adjournment
6:30—Cocktail Party and Reception

Informal Beefsteak Dinner — Hotel Biltmore—December 7th, at 7:30 P.M.

———♦———

Camouflaged insecticides are the latest development in the battle against crop-destroying insects, according to a patent granted to Mayne R. Coe, of the U. S. Department of Agriculture. Blending with the color of the plants on which they are sprayed, such insecticides, just as camouflaging conceals tanks, guns and battleships in war time from an enemy, — are invisible to attacking hordes of insects. The patent is for an insecticide such as pyrethrum powder, nicotine dust, and rotenone, the individual particles of which are covered with a thin film of pigment or dye. Chlorophyll green, the pigment which gives leaves their color, is the camouflaging "paint."

Primarily Mr. Coe's invention is concerned with preserving the killing power of insect poisons. Nicotine, pyrethrum and rotenone are effective bug killers immediately after spraying, but lose most of their death-dealing power after a few hours of exposure to sunlight. Only certain rays are responsible, however. Mr. Coe's patent covers means for shielding out the rays that are harmful to the insecticide. Enclosing each particle of the spray does the trick. The protective screen is applied by mixing the insecticide in a water solution of gelatin or glucose and the chlorophyll dye. The mixture is then sprayed on the plants, the gelatin acting as a glue to make the camouflaged insecticide particles stick to the plant. *Science Supplement* **86**, No. 2235, 10, October 29, 1937.

DEATH . . . . . .

If your insecticide is based on Lethane 384, this single word, briefly but very adequately, tells the result of spraying insects with your product. ⋆ ⋆ Lethane 384 insecticides kill—kill rapidly—kill a wide variety of insects—kill egg, larval and adult stages of insects. In addition, insecticides based on Lethane 384 repel, have residual effectiveness in certain cases, are always stable and uniform, are economical in cost.

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PYRETHRUM

Short crop and poorest quality in history mark receipt of 1937 crop flowers

SHIPMENTS of pyrethrum flowers of the 1937 crop received thus far by American importers are stated to be about the poorest quality ever to arrive here during the fifty years that pyrethrum has been cultivated commercially in Japan. In 1935 and in 1936, the quality of flower shipments was nothing about which to boast, but 1937 flowers show even a further decline in quality from these previous low grade crops. The color of the 1937 flowers is considerably darker than normal, and the flowers are not uniform, being a mixture of colors with some running to a dark chocolate brown. The most serious shortcoming of the 1937 flowers, particularly from the angle of extract manufacturers, is the low pyrethrin content. From the first shipments in August up to the present time, there has been a steady decline in the pyrethrin content of arriving shipments. On the average for the past four months, pyrethrin content of flowers has been about twenty per cent under the average of the crops for the preceding four years.

A number of factors are behind the low quality of Japanese pyrethrum shipments this year, the most prominent of which has been the bad weather conditions during the growing and harvesting season. The total crop itself was considerably smaller this season,—and the output of high quality flowers was very small,—the crop showing a drop to 9,912 tons from a figure for 1936 of 11,127 tons. In 1935, the production in Japan was 12,753 tons. Added to a decline in flower production this year of over ten per cent, is the drop of twenty per cent in average pyrethrin content, — the equivalent all told of eliminating from the market this year close to one-third of the normal Japanese pyrethrum production when compared with 1935 and 1936.

Throughout the growing season in all the Japanese prefectures, there was far too much rain this year. It interfered with proper cultivation and development of the flowers. When harvesting time arrived, there was still too much rain, particularly in the northern prefectures. This meant that the drying flowers were rained on time and again, preventing drying, causing excessive handling, rotting, fermentation, and a deterioration of the pyrethrin content as a result of the fermentation and oxidation. The elements, rather than the growers, were directly responsible for the breakdown in quality.

The Sino-Japanese situation, as might be expected, also interfered with the production of pyrethrum to some extent. Evidently the pressure of other crops, food crops especially, was responsible for a reduction of over fifteen per cent in 1937 pyrethrum acreage, a drop from 71,880 acres in 1936 to 60,160 acres in 1937. With a large Japanese army in the field, the remuneration from food crops undoubtedly paid the Japanese farmer better than growing pyrethrum. On top of a sharp cut in acreage, the yield of pyrethrum per acre this year was 6.0 tons as against 6.4 tons in 1936.

A check-up on the condition of pyrethrum shipments arriving in the United States reveals more in detail the facts with which pyrethrum millers and extract manufacturers, and also insecticide manufacturers, are faced. Arrivals during August, September, October, and part of November show upon analysis pyrethrin figures from 10 to 30 per cent under the averages for the corresponding months of 1933, 1934, 1935, and 1936. August shipments in previous years showed an average of 1.08 per cent pyrethrins. This year, the figure was under 0.98 per cent. September average for 1933-36 showed 1.04 per cent pyrethrins, while September of this year gave 0.92 per cent. October for the previous years gave 1.06 per cent, while this year it was 0.83 per cent pyrethrins. November shipments of previous years averaged 0.98 per cent. This year, early November figures showed pyrethrins of 0.7 per cent and below. Later shipments, as in previous years, are expected to show a further drop in pyrethrins from these levels.

THESE figures portray clearly the position in which the American manufacturers of pyrethrum extracts find themselves. In order to manufacture what has been commonly accepted as a standard extract, 20 pounds of granulated pyrethrum per gallon have heretofore been required. In order to make the equivalent of a standard 20-to-1 pyrethrum extract with 1937 crop flowers, 25 pounds, and in some cases up to 28 pounds, of flowers are required. This means that from 25 per cent to 40 per cent *more* flowers are being consumed to make the same quantity of extract of standard toxicity, and that the cost of manufacture is proportionately higher.

Extract manufacturers who quoted prices and entered contracts calculating their costs only on the price of pyrethrum flowers per

Field of pyrethrum flowers in full bloom.

pound, — anticipating that the normal 20 pounds per gallon would be required, and not foreseeing a sharp drop in pyrethrin content this year, —are quite distinctly not in an enviable position today. It is evident that were it not for competitive conditions, the price of extract would undoubtedly have advanced sharply during the past two months in keeping with the unforeseen jump in material costs.

Next in line to consider after pyrethrin content, is the color of the 1937 flowers. Samples examined show a wide variation in color within a single bale. Some individual flowers are a very dark brown, almost black. Others are a pale straw color,—giving the appearance of a withered flower which had withstood sun and rain for a long period. Few of the flowers have the normal color of F. A. Q. pyrethrum flowers. The extracts manufactured from these 1937 flowers are somewhat lighter in color than those of previous years, although not sufficiently lighter to be of material consequence. This lighter color of the extract, in spite of the darkness of many of the flowers, is stated to be due to a destruction of the natural vegetable coloring by exposure, fermentation, and rotting. Finished fly sprays made from 1937 extracts, however, are so little different in shade from those of previous years as to be hardly appreciable.

A NATURAL question arises in considering the condition of pyrethrum shipments this year. Why were these low grade, off-color flowers shipped from Japan? Why did they not ship only the better material? The answer is that good quality pyrethrum is very short in Japan. The crop has been small and the demand heavy. Shippers have taken advantage of this situation to ship almost anything in the way of pyrethrum, mixing in a good proportion of 1936 carry-over flowers of very dark color and low toxicity,—and also rain-damaged flowers from the 1937 crop, as a means of getting rid of them. It has been an opportunity to unload any and all qualities of flowers. War-scared buyers the world over have been glad to obtain pyrethrum supplies of almost any kind or condition, and nobody has known this better than the Japanese shippers.

In sharp contrast to Japanese shipments, are noted the arrivals of Kenya (African) flowers controlled by English shippers. The same type of weather conditions hindered the growing and drying of flowers in Kenya as in Japan,—far too much rain. Production was sharply reduced and the supply of good flowers was unusually small. There was considerable production of damaged and off-quality flowers but these Kenya refused to ship for export. As a consequence, the U. S. imports of Kenya flowers, while not up to the high standard of previous years, have not been sharply below the normal average in quality as has been the case with the Japanese. Where the normal average pyrethrin content of

Kenya pyrethrum is 1.50 per cent to 1.55 per cent, arrivals this year have been running in the vicinity of 1.25 per cent pyrethrins. The only trouble is that the supply of flowers from Kenya is far and away too small to take care of the demand for them.

Still another important factor enters into the pyrethrum quality picture at this time.—and it is a factor about which little can be done. It is the manufacture of fine milled pyrethrum powder. Where in making an extract, the quantity of pyrethrum can be increased to boost the toxicity of the extract, this cannot be done in producing a fine powder. The flowers are milled and if the pyrethrin content is low, the powder will not have the insecticidal efficiency of a powder made from higher grade flowers. If the flowers are dark, the powder will be off-shade and not the clear yellowish color which it should be. Consequently, powder milled from 1937 flowers will undoubtedly be dark in color and subnormal in toxicity.

IN connection with the present pyrethrum situation in the world markets, it is interesting to note a summary of the history, development and production of Japanese pyrethrum which appeared recently in the Bulletin of the Imperial Institute, published by the Imperial Institute, South Kensington, London, S.W. 7. This review points out that Japan today produces three-quarters of the world's pyrethrum, that pyrethrum was introduced into Japan in 1881 from Dalmatian seed at the farm of the Komaba Agricultural School at Tokyo and that commercial cultivation began about 1886. It tells of the first growing in Persia (*pyrethrum roseum*), the introduction early in the nineteenth century to Europe as an item of commerce, and the first introduction of the newer type pyrethrum plant (*pyrethrum cinerariaefolium*) a half century later (about 1850) into Dalmatia, and the decline of the Persian species.

In 1896, cultivation of pyrethrum started in Hokkaido prefecture in Japan, and today Hokkaido is by far the largest producer among the Japanese provinces. Because the climate and soil were especially adapted for pyrethrum growing, the acreage in Hokkaido increased in 15 years (1912-1926) from 31 acres to over 25,000 acres, and production from 14,000 pounds to over ten million per year.

Because the cultivation, harvesting, and drying of pyrethrum are operations requiring above all cheap labor, experimental attempts to grow the plant in many countries have not met with success. Japan has cheap labor. This is an important factor as shown by an analysis of cost of pyrethrum production as outlined in the Bulletin. Pickling, drying, packing, grading, and storing are all discussed as well as a detailed outline of planting and cultivation methods.

Bales of pyrethrum flowers, showing one bale broken open and ready for milling.

Determination of Pyrethrins

A collaborative study was made of the Seil method for the determination of pyrethrins I and II, and the methoxyl method for pyrethrin II of Haller and Acree. Results by the Seil method showed good agreement between duplicate determinations by the same analyst, but lack of uniformity among the results of different analysts. With Haller and Acree's method, there was good agreement between the results of different analysts on some but not all of the samples. It would seem that pyrethrins in older samples of pyrethrum may undergo some change that makes them of less insecticidal value than the pyrethrins of fresh samples. J. J. T. Graham. *J. Assoc. Official Agr. Chem.* **20,** 388-92 (1937).

The use of *Tephrosia vogelii* as an insecticide has been suggested. Ether extracts of prunings of this plant, calculated on the moisture-free basis were: 6.91 per cent for buds and leaflets, 3.86 for petioles, 3.81 for stalks and 5.95 for whole prunings. These figures are very low when compared with that of a high-grade root; i.e., *D. elliptica* Changi No. 3, which has a value of 27 per cent. C. D. V. Giorgi. *Malayan Agr. J.* **25,** 300-1 (1937); through Chem. Abs.

The rotenone content of a series of samples of cultivated derris ranged from 0.06 to 8.36 per cent. In assays on the same samples, the carbon tetrachloride method gave slightly higher results than the dry ether method. Louis Retaud. *La Nature No.* **2996,** 217-8 (1937).

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"MEET THE INDUSTRY"

By W. B. Eddy*

OUR Association has survived another birthday since a small determined group of manufacturers organized it in 1914, partly for self defense, partly for other reasons, perhaps not then all fully clear. The Federal Insecticide Act of 1910 might be called the father of our Association idea, and the mother may not be so clearly defined. She might be called recognition of a new industry.

If we organized for defense, in coping with the Act of 1910, we surely have no complaint about our relations with the Federal supervisors of that Act. We have found them willing to work with us in carrying out the purposes of the Act, and believe they have found us prompt and ready to assist them in their work. We appreciate the regular attendance of members of that department, at our meetings, their surprising agreeability to "standing by" even through some of the more tedious parts of our sessions. We are grateful for the help they have given us in working out some of our problems.

If we organized for defense, we have not stopped there, any more than a certain Eastern Army, which was also organized for defense. We understand that army will now carry on its defense into the very middle of China, if it takes the last Chinaman.

The bigger part of our job is well under way, with plenty still to be done. In 1914, we knocked on a Washington door and said, "Meet the Industry," and much mutual good has come from that. Since then, we and our excellent magazine representative "SOAP", have gone forth to non-members of the Association who should be members, and we've said, "Meet the Industry", with the result that we have annually increased our membership in size and influence. Those added members, and many more still to come in, realize that we are working for the common good of the industry, and the ways of that are clear.

Visualize, if you can (and you cannot), the vast grist of new legislation that our committee, under John Wright, has had to digest in the past year or two. Try, as an individual, to cope with that in the way that our Association has done, through this committee. You will find there a service that you cannot buy elsewhere for any price that you can afford. It's being done for you at only the cost of your membership certificate.

Observe the progress of the standards and the specifications committees on insecticides and disinfectants, the results of which are yours, at no extra charge. You can get that combined knowledge only through your Association. Same is true of your other scientific committees, who assemble the freely supplied facts of our work from all sources, most of which is not otherwise available.

All this work, continued, is carrying a valuable message to another interesting group, upon which our very existence depends, our public. This work says to them, "Meet the Industry". When we adopt and publish fair competitive quality standards for insecticides and disinfectants, on goods that can be made and sold by all of us, and that can be bought and used with confidence by all buyers, large and small, we serve the public, in a way that benefits our whole industry. We discourage poor goods, we increase the general business on reliable products.

For all we've done, we've just scratched the surface. We are continuing our study and research, individually and collectively, on newer and better insecticides and disinfectants, and on new uses for them. As a result of our work, five years from now, these products may be just as different from the present lines, as the automobile of today is different from its predecessor of 1910. We have an open mind on new raw materials for use in insecticides and disinfectants; but we do warn the makers that their claims must be proven by outside, recognized capable research. Science is the basis of our manufacture. Science means "to know", not to hope, or to guess. The day is past when one of us can take hearsay and put it on a label for a sales package, or when we can copy the smell and the color of a competitive product, and then say that our goods will do all that our competitor claims.

Here are our next opportunities to represent the industry. The Federal Bureau of Standards has stated its willingness to consider our specifications for insecticides and disinfectants. Ultimate favorable action in that line will register and endorse our industry with the public, as a sound and going concern. We'll hear more of that later in the program; and, with your help,

* Address of the President, 24th Annual Meeting, Nat'l Assn. of Insecticide & Disinfectant Mfrs., Dec. 6, 1937.

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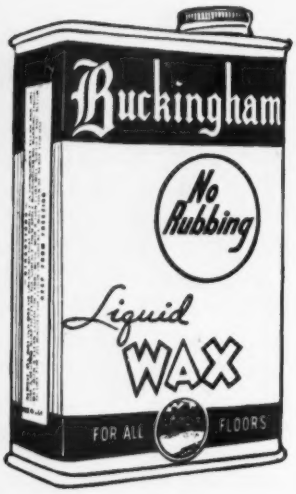
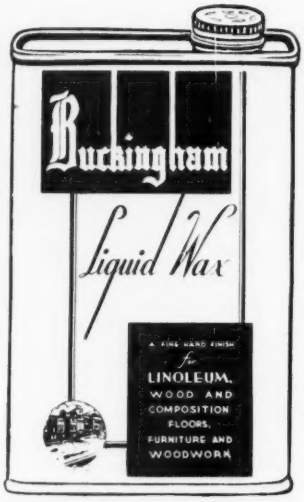


Repeat orders are easier to get with Buckingham waxes. Their uniform high quality is based on years of manufacturing experience. Ask us for samples and prices.



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we will eventually consummate that objective.

Still remains one door on which we are courteously rapping, the U. S. Public Health Service. That capable organization not only inspires the national attack on sickness and death; but it is the clearing house of knowledge on sanitation, for regular and emergency purposes. It is unthinkable that this industry should continue to be a practical stranger to the Public Health Service. Our Washington committee, under Melvin Fuld, will outline our progress, and point out the course of future work, to be done in this important direction. It will be a great day for us when, and if, the values and uses of our products, are known and recommended by the United States Public Health Service.

In closing, I want, on your behalf, to thank all chairmen and members of your committees for the faithful and valuable service they have given your work during the year. I express the hope, for them, that you will find the coming program fruitful of ideas and benefits, and I trust you will give it your best attendance and attention. Also, I want to thank you for having done me the honor and the favor of permitting me to work with such an excellent group of men as your Board of Governors and your committee workers.

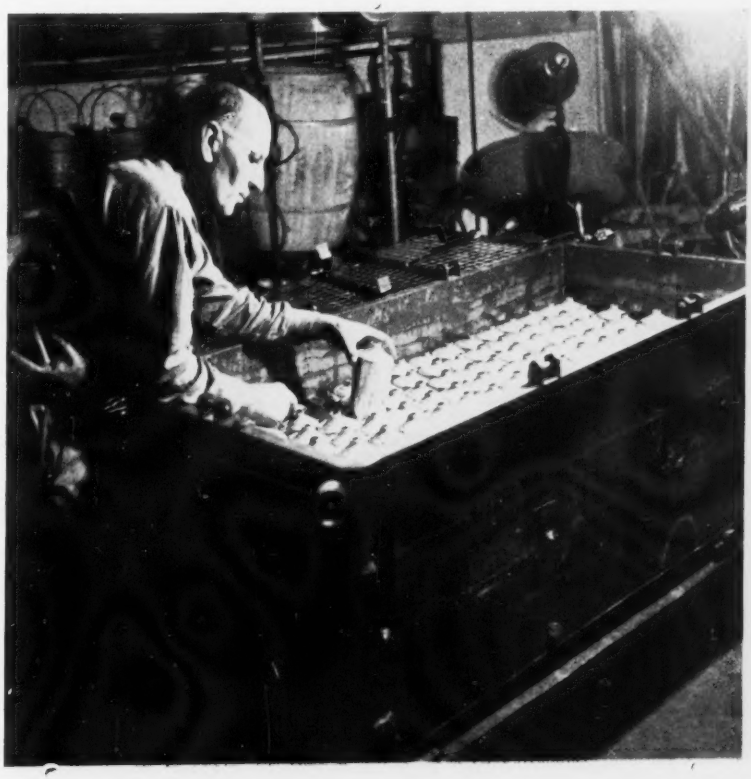
Chemical Show Opens Dec. 6

The 16th Exposition of Chemical Industries opens Monday, Dec. 6, and runs through Saturday, Dec. 11. Featured among the exhibits displayed at this year's exposition are: Laboratory equipment and apparatus; plant equipment and processing machinery, which will cover all of the unit processes of chemical engineering as well as operations related to the chemical industry; pumps which will include those capable of handling rarefied gases at pressure less than .01 micron absolute pressure, and pumps for handling asphalt mixed with as much as 30 per cent ground glass and slate dust; accurate weighing instruments for industry, featuring a new totalizing scale designed to weigh automatically and indicate the amount of materials transported over belt conveyors; materials handling equipment, which will include hydraulic lifts, stackers, racks and skids, and also conveyors of varied types. The American Society of Mechanical Engineers will also hold their annual meeting in New York the week of the Chemical Exposition, at the Engineering Societies Building, 29 W. 39th St., New York.

Restrict N. Y. Sales Tax

The State Court of Appeals in Albany, N. Y., ruled Nov. 23 that merchandise sold in New York City but delivered from outside the state is exempt from the city sales tax of 2 per cent levied to provide funds for unemployment relief. In two decisions the court upheld lower court rulings which prevented the city from collecting the tax on the sales of National Cash Register Co., Dayton, O., and West Publishing Co., St. Paul, Minn. This ruling, according to legal advice, does not exempt all goods manufactured outside of New York from the sales tax. The ruling applies only to goods ordered by prospective purchasers from New York City branches of manufacturing companies in other states, with the goods delivered directly to the purchaser.

The filling of liquid soap containers for the cleaning force at Rockefeller Center, New York was formerly a full day's work for one man. With the device shown in the photo, 600 cans are filled in 18 minutes. This consists of a vat into which empty tins are placed with the covers removed. A heavy wire screen is then placed over the cans to keep them in place as liquid soap is pumped to the level of the vat, filling the tins. The pump is then reversed and soap (except that in tins) is removed from the vat. The pump and rubber hose are connected with the soap tanks. The vat is mounted on castors and pushed to stations where soap is needed in order to save handling.



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Rearing House Flies

A new method of rearing Musca Domestica L more efficiently and economically developed at the U. S. Department of Agriculture[1]

By Craig W. Eagleson
Bureau of Entomology and Plant Quarantine

A NEW method of rearing *Musca domestica* L. has been developed to produce large quantities of flies as nearly uniform in vitality as possible and at small expense. In points of simplicity, efficiency, and economy, this method has proved superior to older methods now extensively used. Successive generations have been reared during two winters. They showed no decrease in vitality, and their fecundity remained unimpaired.

Culture Media

The larval food is a fermenting mash of oats. Two kilograms of crimped whole oats[2], 4 liters of water, and 200 cubic centimeters of cheap syrup are mixed in a No. 2 washtub and permitted to soak 2 hours. One cake of compressed yeast or 200 cubic centimeters of active yeast culture ("starter") is then mixed with the softened oats, and the tub is covered with muslin and placed in an incubator at 32° C. After 3 days the tub should be strongly odoriferous of fermenting grain and in proper condition to receive eggs. Smaller portions may be used in case fewer flies are desired. The medium will be found satisfactory for use in any container which permits rapid dissipation of both carbon dioxide and heat from the ferment.

The adult food is a soft gel which provides an entirely adequate ration for superior vitality, longevity, and fecundity. It is convenient, does not sour or putrify before 3 or 4 days at summer temperatures, and will not ensnare or drown the insects. When stored in a referigerator, it will keep 3 weeks or longer.

Recipe:

500	cc. water
10	g. agar
200	g. ripe banana pulp
150	g. sugar
1,000	cc. skimmed milk
25	g. gelatin
0.1 to 0.25	cc. 40-per cent formalin solution.

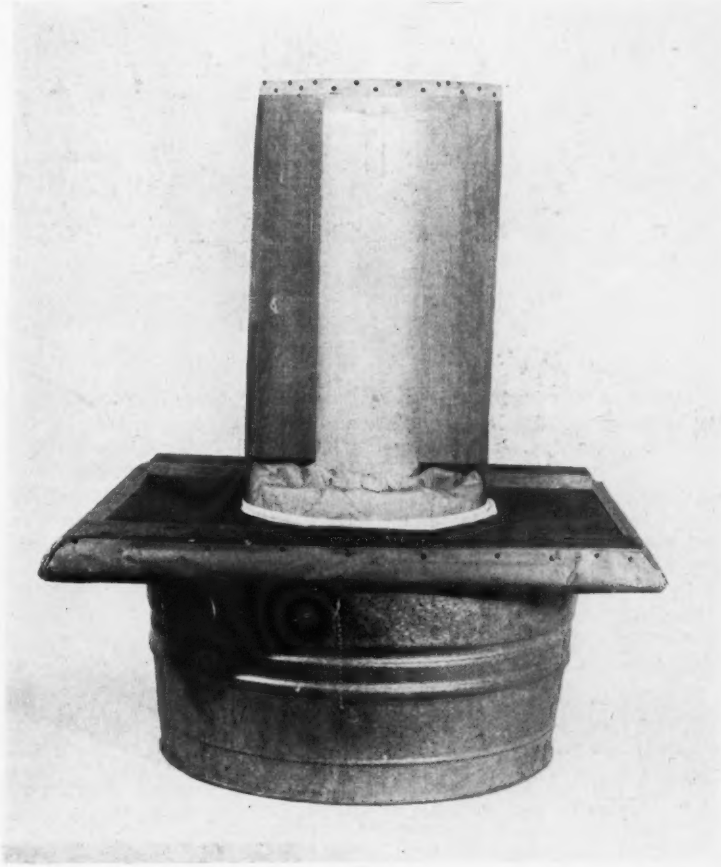

Fig. 1. Aging cage inverted over tub, with caging board between.

[1] The writer is indebted to Doctor F. C. Bishopp, under whose direction this method was developed. Credit is due Mr. H. M. Brundrett for the origin of part of the equipment used. Doctor Roy Melvin developed the larval food.

[2] Not the "rolled oats" processed for human consumption.

THE paramount wax demand of the day is *water-resistance*. The waxes you sell may have a plus rating in every other qualification... but their ability to pass the water test is often the sole determining factor between a customer gained and a customer lost. Wet fall and winter days are going to put even greater stress on this one requirement. Investigate *Bright Beauty Self Polishing Waxes* for waxes that can "stand the gaff" of every water hazard. Sold only under private label, they have a background of over forty years of laboratory research and experimentation. Greater water-resistance is but one of their many outstanding features. Every quality to meet user demand has been tried, tested and built into this quality line. Try *Bright Beauty Waxes* under your own most rigid tests. Write today for free liberal samples!

BRIGHT BEAUTY SELF-POLISHING WAXES are made in several grades that vary only in solid content . . . and are sold under private label only. Prices are surprisingly low. Beautiful three-color, plate-style labels with your brand and firm name are available on any grade. Write today for complete details and quotation on your requirements.

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- Spirit Liquid Prepared Waxes (buffing type)
- Powdered Dance Floor Waxes
- Concentrated Cream Furniture Polish (dilute with water as high as 4 to 1)
- Paste Cleaners
- Rug Shampoo

Add agar, banana, and sugar to water and boil gently until banana dissolves completely (1 to 5 minutes). Add milk and gelatin, stir, and let cool. When cold, add formalin and put in refrigerator to set. Do not freeze the gel.

The gel is fed in small, glass sauce dishes. A beaker containing water and a piece of sponge to prevent drownings is kept in the cage at all times. When eggs are desired, a small amount of fermenting oats is put in a wide-mouth bottle in the cage.

Equipment

Eggs in measured quantity approximating 15,000 (2 cc.) are spread on a square of moist paper towel, which is laid, with the eggs downward, on a culture of fermenting oats. The tub is covered with muslin held tautly in place by a cord tied just beneath the rim. It is therefore necessary to use tubs with handles attached at least one-fourth of an inch below the rim. The tubs are placed in an incubator held at 32° C. and allowed to remain until the adults have emerged. Each culture should yield at least 10,000 adults.

The adult flies are released from the tubs into aging cages by means of a caging board (fig. 1). This is a substantial wooden cover, 6 inches larger than the diameter of the tubs, with a hole 9 inches in diameter in the center of the cover. The board is padded and covered with heavy wrapping paper on the under side, in order that it may fit tight despite any slight unevenness of the tub's rim.

The caging board is placed over a tub containing flies, and an aging cage with sleeve loosely rolled back is inverted over the opening in the board. The cord is then released and the muslin cover slipped off to release the flies without lifting the padded board. After sufficient flies have flown up into the cage, the muslin cloth is carefully replaced. The folds of the sleeve are tucked together and the cage of flies is lifted off.

The cages in which flies are kept cost about 50 cents each and house from 2,000 to 3,000 flies. The materials required are:

1 piece 1″ x 12″ x 12″ No. 1 pine
1 piece 1″ x 6″ x 21″ No. 1 pine
1 piece 20″ x 40″ 14-mesh galvanized screen wire with reinforced selvage
1 piece 27″ x 38″ white cotton sheeting
1 piece 5″ x 5″ 24-gauge galvanized sheet iron
1 3″ flat angle-brace
4 2″ No. 10 flat-head screws
4 ¾″ No. 9 flat-head screws
1 ¾″ No. 9 round-head screw
100 No. 5 upholstering tacks

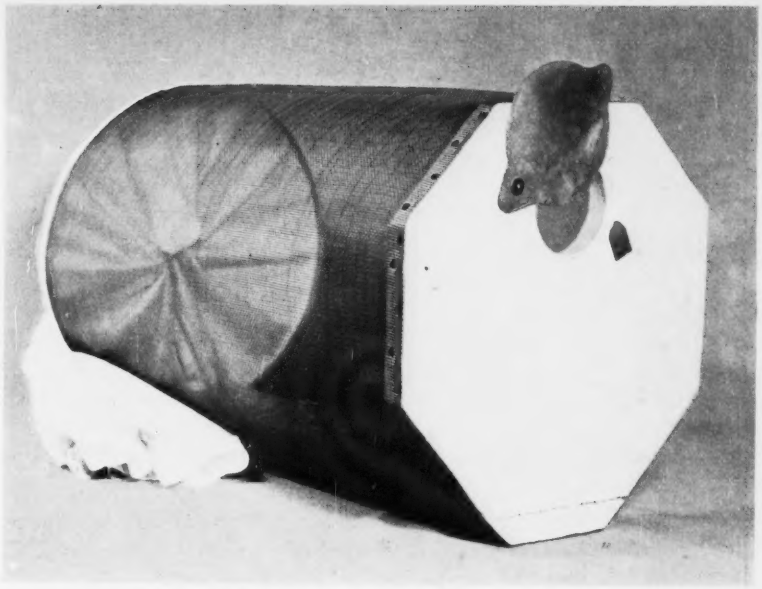

Fig. 2. Rear view of aging cage, showing door.

The 12-inch board is cut to an octagon and bored with a 3-inch-diameter hole centered 4½ inches from the top (grain of wood must run vertically). This forms the rear of the cage. To give better support to the screen and to facilitate cleaning, both edges of the 1″ x 6″ floor piece are beveled 45° with the top surface. The floor is screwed to the back and the joint braced with the angle iron. The frame is given three coats of white gloss paint (waterproof) before the screen is attached. The screen is tacked around the frame, the raw edges overlapping on the bottom. The screen must extend one-fourth of an inch beyond the end of the cage floor to facilitate stitching the sleeve all the way around the cage. The cloth sleeve is turned inside out and drawn over the cage so that the raw edge is even with the edge of the screen. The two are then stitched together about a fourth of an inch from the edge, and the sleeve is drawn back off the cage.

The 3-inch hole in the end of the cage serves as a gate through which flies are easily liberated in any desired numbers. The opening is closed by a piece of galvanized sheet iron, circular except for lobes on opposite sides (fig. 2). A screw through one lobe forms a pivot for the gate. A clip on the opposite side of the hole engages the other lobe to hold the door firmly shut. After use the entire cage is washed in a tub of soapsuds. The sleeves and screens may be renewed easily.

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What Termite Menace?

By Neely Turner

Connecticut Agricultural Experiment Station

IN the August, 1937, issue of *Soap*, M. G. Jorgenson published "The Termite Menace," an article apparently directed at my discussion of "Termite Control" in *Soap* for April, 1937. A careful study shows that the arguments in "The Termite Menace" are based (1) on the assumed inexperience of the writer, (2) on misquotation and changed meanings by selecting a word here and there and (3) on sweeping statements, unsupported by any tangible evidence, that metal termite shields are useless. Although the writer has no desire to keep open an unnecesary controversy, these points require an answer.

(1) The title of the article printed in April was originally "Control of Subterranean Termites." In editing, this title was shortened to "Termite Control" without the author's knowledge. This is unfortunate, but is a minor matter, since subterranean termites were listed by specific names. The article was written for termite control operators and not for laymen. The writer makes no pretense at being a termite "expert," but the lessons learned in five years of termite work form a firm practical basis that cannot be ignored. In that period of time, about 750 infested buildings have been thoroughly examined.[2, 3] In addition the writer has actually supervised termite control work in 20 buildings from the time termites were discovered until the final examination, two years after completing control work. This included design and placement of shields, necessary structural changes, and use of chemicals in wood and soil treatment. During this time the effectiveness of metal shields has ceased to be a theory and is now an accomplished fact.

(2) The misquotations and misinterpretations refer to three specific instances:—(a) The matter of "exaggerated fears" has been handled by picking out a word here and there instead of reading the two paragraphs on the subject as a whole. There is certainly no occasion for "alarm" over the presence of termites in a building in the sense that there is alarm over shipwreck or a hospital fire. Termite infestations bring up a problem in building maintenance not unlike other maintenance problems, rather than like an emergency such as fire. The "rare" refers to cases in which buildings are actually in danger of structural failure, "in serious *condition*." There is nothing at all misleading about the statement of damage, since it was specifically stated that the figures refer to Connecticut alone. (b) The entire intent of the two sentences regarding the services of "a competent contractor or architect or building inspector" has been overlooked. The statement specifically suggested calling in such authorities "in the rare instances in which a building is found to be in serious structural condition." These authorities know more than the average termite control operator about the structural safety of buildings. (c) The omission of the word "*open*" in reading the statement "Termites do not enter buildings through open windows or doors . . . . ." changed the meaning of this sentence. A careful rereading of the original shows no misstatement of fact.

(3) Mr. Jorgenson's final paragraphs in regard to termite shields are composed of a succession of sweeping statements and conclusions in regard to "the utter folly of the claim made for shields." These statements and conclusions are entirely unsupported by any facts and therefore cannot be accepted as valid criticism of the shielding principle. As a matter of fact, this portion of Jorgenson's article is simply a statement of theory as to how termite shields might fail, rather than real proof of failure.

This entire controversy seems entirely unnecessary, especially in the face of the evidence that metal termite shields, when properly installed, are effective in preventing termite damage.[1, 4] However, a short description of termite shields (based on Snyder's specifications) and a discussion of what they are meant to do may clarify the situation somewhat. A metal termite shield is a continuous sheet of non-corrosive metal, without cracks or holes, placed in or on the foundation between ground level and the first-floor framework, extending completely through or over the foundation. The projecting edges are bent down at an angle of 45 degrees. Shields should be provided for all posts, pillars, partitions or any other portions of the building extending from the first-floor framework to the ground, and partition shields should be joined to the main shield. In all cases the shield should be 18 inches above the ground, and in all partially excavated areas there must be 18 inches clearance between the ground and any portion of the first-floor structures. Snyder's specifications call for a horizontal extension of two inches beyond the foundation and a two-inch projecting edge bent downwards.[1]

These specifications define a properly installed termite shield, and any installation which is not made strictly according to these specifications is not a properly installed termite shield. This shield prevents termites from entering through cracks in the foundation and also prevents entry by means of shelter tubes built up over the face of the foundation walls. Termites have not

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been able to construct shelter tubes up over the edges of a properly designed shield. Theoretically there is nothing to prevent termites from building out from the foundation wall at an angle and clearing the edge of a shield, but in actual practice there have been no reports of such an occurrence.

In the case of an existing infested building, the specifications are exactly as listed above, but the function of the shield is somewhat different. Here the shield will prevent entry from the ground, but at the same time it should also prevent any termites in the wood above the shield from making a new ground contact. In the average case shields will do that without trouble. In rare cases in which the infested wood is wet, termites have been able to drop shelter tubes *down over* the edges of shields or *down from woodwork* in partially excavated areas. In the author's experience, this has happened in one out of 30 cases of shield installation in heavily infested buildings.[3] The use of five gallons of soil poison effectually stopped the termites in this one instance. The construction of shelter tubes *down over* a shield is no evidence of shield failure.

With these facts in mind, it is not difficult to define a failure of a metal termite shield. Termites crossing up over a shield installed strictly according to the specifications listed above would constitute a shield failure. To date no such failure has ever occurred. There has undoubtedly been a large amount of shield installation which does not comply with the specifications, and such installations may not be satisfactory. This does not alter the fact that properly installed shields will be effective. The use of a properly installed shield in part of a building will not prevent termite activity in the unprotected portion.

So far as the writer knows, every entomologist who has studied and observed termites, supports these conclusions regarding shields. It is absurd to insinuate that every one of this group of men has been mistaken in his conclusions. It is also absurd to state that these men, in responsible positions of public trust, are issuing "propaganda" including "fantastic and impractical" claims for termite shields.

There is a common ground on which termite control operators and state and federal entomologists can meet and work together.[4] This common ground is to be reached by a careful study of *facts* and a reasoning together. If there are facts which prove that it is "impossible to insulate a building against subterranean termites with metal shields," these *facts* should be published at once. *Facts* and not sweeping statements will settle the issue.

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1. Snyder, Thos. E. *Our Enemy the Termite.* pp. 1-176. Comstock Publishing Co., Ithaca, N. Y. 1935.
2. Turner, N. and Townsend, J. F. *Termite Control in Buildings in Connecticut.* Conn. Agr. Exp. Sta. Bul. 382. 1936.
3. Turner, N., Zappe, M. P. and Townsend, J. F. *Observations on Termites and Termite Control.* In Conn. Agr. Exp. Sta. Bul. 396. 1937.
4. Turner, N. *Relation of State Workers to Commercial Termite Control Companies.* Jour. Econ. Ent. 30: 94-98. 1937.

Potash Soaps

(*From Page* 33)

edition of the U. S. Dispensatory, where, after abandoning linseed oil for cottonseed oil in certain previous editions a return is made to linseed oil) has long been accepted as beneficial to the skin. The so-called new 'vitamin F', being a concentrate derived from linseed oil, it is quite possible that it properly finds its place as an ingredient in the manufacture of soap."

In corroboration of this may be cited the German *Sapo Kalinus* D.A.B. VI, under which heading may be found the following formula:

Linseed oil ..... 43 gm.
Solution of potassium hydroxide (15 per cent) ..... 58 gm.

Heat on a water bath to 70° C. with stirring, then add

Alcohol (90 per cent) ..... 5 gm.

Continue heating until saponification is effected, and a small portion of the soap yields a clear solution with water, and almost clear with alcohol. Adjust the weight of the product to 100 gm. by evaporation, or by the addition of hot water. Contains 40 per cent fatty acids.

On the other hand, *Sapo Mollis*, as included in the British Pharmaceutical Codex, is described as "soft potassium soap prepared from *olive* oil and consisting chiefly of potassium oleate. Soft soap occurs (it continues) as an almost odorless, unctuous substance, varying in color from yellowish-white or yellowish- brown to green. The tint of soft soap depends on the olive oil employed in making it, but copper compounds and chlorophyll are sometimes added to produce an artificial green color. *Standard, B.P.*—Soft soap yields not less than 44 per cent of the fatty acids of olive oil. It complies also with limit tests for chloride and other alcohol-insoluble substances, alkali hydroxide, alkali carbonate, free fatty acid and free fat."

Linseed-Vitamin F Soaps

I UNDERSTAND, however, that representations will be made in due course in the U.K., with a view to getting the olive oil replaced by linseed oil. It is an undoubted fact that linseed oil has for generations been specified in pharmaceutical literature for its unique action on the skin. The point that has perhaps most impressed manufacturers in the U.K. is that linseed oil has such a remarkably rejuvenating effect upon the hands of workers who come in daily contact with it.

Personally I see no reason for doubting that the vitamin F theory is substantially correct. I have in fact quite recently seen cases of skin diseases (notably *acne vulgaris*) treated with marked success by means of vitamin F-containing ointments. Without going into vexatious and unprofitable discussions regarding nomenclature, and always bearing the long medical history of linseed oil in mind, I think it is safe to say that a linseed oil soft soap undoubtedly has greater dermatological merit than, say, an olive oil or cottonseed soft soap. While the further reinforcement of linseed or other soft

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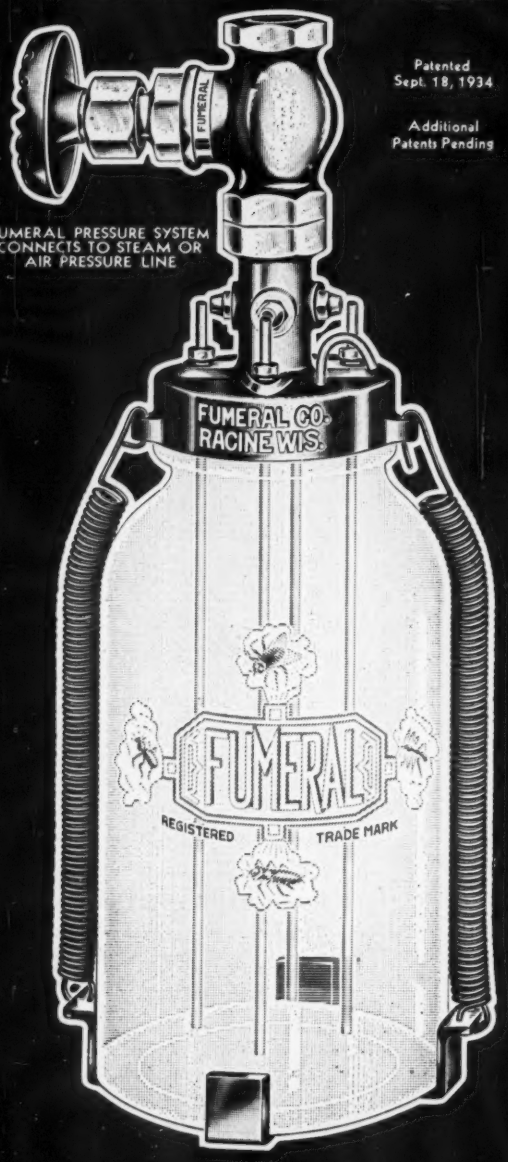

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soaps with vitamin F in a more concentrated form is surely a matter deserving the close attention not only of soap manufacturers but also of the hospitals, clinics and so forth that are in the market for a pharmaceutical soft soap of the highest medicinal efficacy.

In concluding this section I would suggest that metal containers for soft soap should be heavily tinned, to prevent as far as possible the development of electro-chemical action and the consequent black discoloration of the soap. In the U.K. heavily wax-impregnated pulp containers have been used with a fair degree of success for the retail packaging of soft soap, as marketed by drug stores.

Liquid Toilet Soaps

POTASH soaps having greater solubility than soda soaps, find further application in liquid soap manufacture, as do also the readily soluble fat and oil stocks (nearly all of low titre) that are commonly used in the making of soft soaps. The most obvious exception to the latter generalization is cottonseed oil soap, which is more soluble than palm-kernel soap, for instance, although it has a considerably higher titre.

Soda soaps are usually employed in relatively low proportion in liquid soap production, and if used they should be based on castor oil, and admixed with a suitable potash vegetable oil soap, with perhaps alcohol and a little sodium or potassium carbonate. The soda soaps of linseed, cottonseed, coconut, palm kernel, olive and sesame are all fairly soluble, but where soda soap is used, a fair proportion of it should definitely, in my opinion, consist of sodium ricinoleate. On the other hand, while castor oil improves the appearance and freedom from sedimentation of a liquid soap, too high a castor oil soap content leads to poor lathering properties.

Liquid soap may be regarded as a more or less dilute solution of soft soap in water. The chief difference lies in that, in liquid soaps, it is possible to use considerably higher proportions of palm, coconut and palm kernel oils, as these permit the addition of larger amounts of water.

Sugar is frequently used in the U.K. as an aid to transparency, though the presence of sugar is apparently frowned upon in American specifications. In any case, sugar is by no means a necessary ingredient and its irritant effect upon the skin is a sufficient reason for prohibiting its use entirely.

The water content of liquid soaps varies according to the oils used, anhydrous soap stipulations, and the price at which the finished soap is to be marketed. Moreover, if rosin is incorporated the total amount of water that can be used is rather less than it would be without the rosin.

For liquid toilet soaps, the fat stock must be carefully selected to give a finished soap that will be free from objectionable odor and produce a rapid, serviceable lather. The occurrence of cloudiness, sedimentation and rancidity have also to be guarded against. Coconut oil by itself gives a good liquid soap, lathering well even in hard water. Its chief disadvantages are the readiness with which it becomes turbid in cold weather and its irritant effect on the skin.

The following blends of oils are recommended as being suitable for liquid toilet soaps:—

(1) soybean 12, coconut 6 (water about 60, caustic potash sufficient to saponify; glycerin or alcohol in low percentages.)
(2) coconut 12, olive 8, castor 2.
(3) coconut 18, castor 5, groundnut 2.
(4) cottonseed 14, coconut 5, distilled red oil 2.

Other blends may be devised according to individual preference, the characteristic properties of the various soaps being kept well in mind. Thus coconut and palm kernel oils give a profuse but thin lather, and may therefore be coupled with peanut, olive or soybean oils, all of which tend to thicken the lather and increase the detergent properties of the soap,—also castor oil or distilled red oil, which help to produce a clear attractive solution.

Alcohols (ethyl, amyl and butyl), sugar, glycerine and sodium hexametaphosphate are all used as aids to transparency. Alkalinity may be neutralized by careful additions of coconut oil, boric acid, coconut fatty acids, or sulfonated castor oil. Hydrolysis is materially retarded by the presence of potassium or sodium chlorides (in small amounts only), and also by potassium carbonate, traces of caustic, and alcohol, etc. as mentioned above.

The manufacture of liquid soaps involves no special difficulties and has been described many times over in the literature. The prevention of turbidity and sedimentation still continues, however, to present the chief problem to the soapmaker. Obviously the first precaution is to use soft or distilled water and the best possible grades of raw materials. Next, the fat charge should be carefully balanced to avoid gelatinization, etc., as described under soft soaps. Third, incomplete saponification must be guarded against. Fourth, the finished soap should be so compounded as to retard hydrolysis and subsequent clouding. Fifth, the soap should be allowed to stand from two to three weeks, after which it may be decanted into a refrigerating tank, chilled, and then filtered.

The viscosity of liquid soaps may be increased by traces of sugar and (according to R. Krings), a small amount of terpineol. Potassium carbonate and potassium chloride (1.5 to 3 per cent) also help to thicken a thin finished soap, but the addition of larger quantities than those specified tends to reverse the effect.

Other types of liquid soap include those intended for industrial uses (containing 10 per cent or more of solvents such as hexalin, methyl hexalin and trichlorethylene), liquid shampoos (containing less water than ordinary liquid soaps, also henna, pine tar, etc.); medicated liquid soaps; and disinfectant fluids. These all present special features that considerations of space prevent me from discussing here.

New Products

Kantor's Silver Polish in new modern package. White emulsion polish in clear glass bottle with contrasting label and black composition cap. Product by Klein & Son of Montgomery, Alabama. Container and closure by Owens-Illinois.

Sprinklets is the name given to its new deodorizing crystals by the Clifton Chemical Company of New York. Lithographed can with sprinkler top by Liberty Can & Sign Co. of Lancaster, Pa.

A modernization of the package for "Formula 111," showing the effect to be secured with square translucent bottle and deep plastic cap. Bottle and closure by Anchor Cap.

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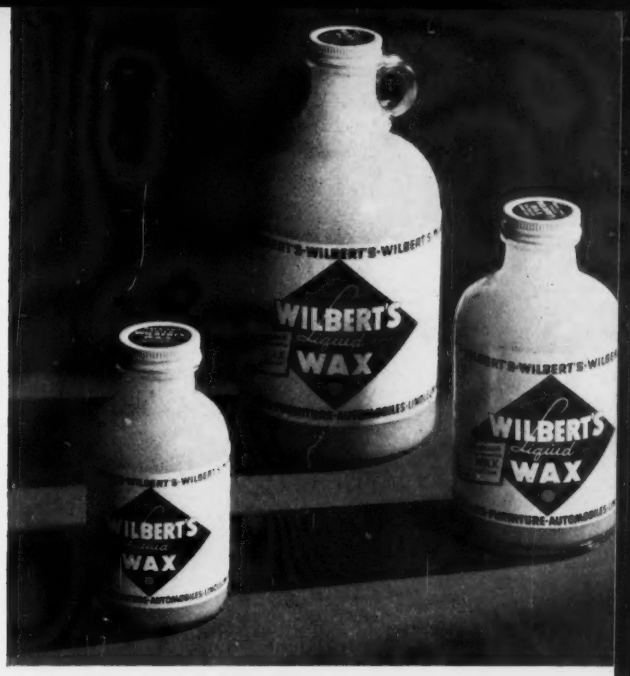
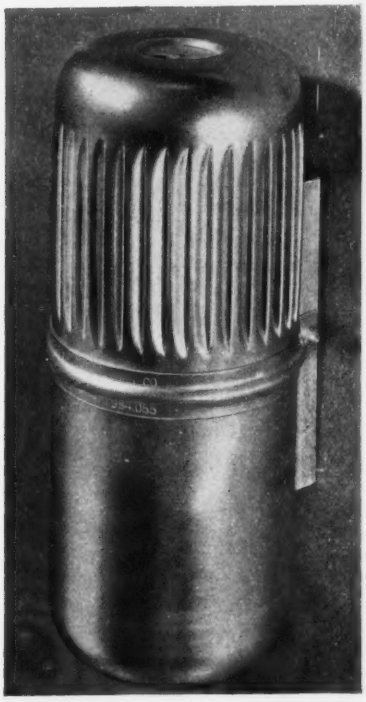


New package design for Wilbert's Liquid Wax, using glass jugs with metal cap and sharply contrasting label design. Product by Wilbert Products, Inc., New York. Container by Owens-Illinois.



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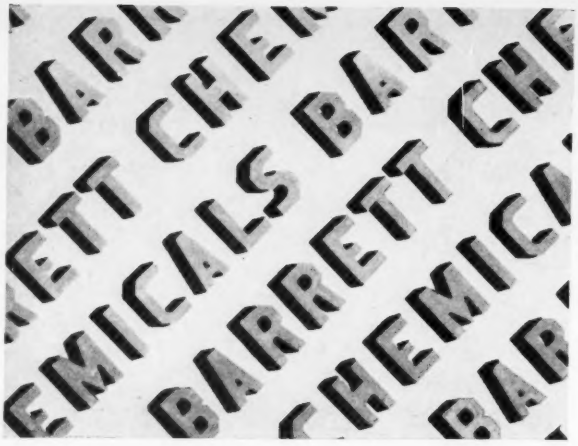

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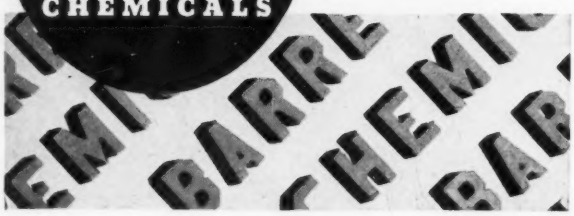


NEWS.....

Solarine Joins I. & D. Assn.

Solarine Co., Baltimore, has been elected to active membership in the National Association of Insecticide and Disinfectant Manufacturers. James F. Beatty, Solarine secretary, will represent the company in association activities.

Krebs Heads Sanitary Suppliers

Charles E. Krebs of American Standard Mfg. Co., Chicago, was elected president of the Affiliated Sanitary Supply Distributors of Chicago at a recent meeting of the association. Mr. Krebs, who has been active in the association's work since the organization was started, will be assisted by Albert Dushek of Albert J. Dushek, the new vice president, and by Louis Herzog of Riddiford Bros., Inc., the new secretary and treasurer. At a meeting of the group held November 22nd, J. Gordon Bennett of LaSalle Extension University spoke on "Salesmanship."

Moore Heads Allegheny

Harold T. Moore, long prominent in the sale of agricultural insecticides, was named president of Allegheny Chemical Corp. Nov. 1. He resigned as assistant sales manager of General Chemical Co., New York, to join Allegheny.

Offer Model Insecticide Law

The Agricultural Insecticide and Fungicide Association has recently prepared a model state law for the control of products of their industry, and will offer this law to state legislatures in an effort to promote uniform state legislation.

Klock Joins M. G. K.

Franklin Y. Klock, formerly secretary and general manager of Murray and Nickell Mfg. Co., Chicago, recently taken over by S. B. Penick & Co., New York, has joined the sales staff of McLaughlin Gormley King Co., Minneapolis. He will be located in Chicago.

Herman S. Kohn Dies

Herman S. Kohn, founder of Veteran Dust Exterminator Co., and president of Sweeping Compound

Herman S. Kohn

Mfrs. Co., New York, died at his home, 411 West End Ave., New York, on Nov. 19 at the age of 60. Mr. Kohn had been in business in New York since 1898, when he founded Veteran Dust Exterminator Co. He was president of that company until his death. In September, 1934, he was instrumental in effecting a merger of a group of New York sweeping compound manufacturers, including himself, to form Sweeping Compound Mfrs. Co. of New York, Inc. He was elected president of the corporation and served in that capacity until he died. Mr. Kohn was born in Zanesville, Ohio. He is survived by his widow, Mrs. Charlotte Kohn.

Turner Insectisol Agent

Joseph Turner & Co., New York, have become sole selling agents for the specialty products of the Pennsylvania Refining Co., Butler, Penna., according to an announcement by the latter company, in New York State, Metropolitan New York, and Northern New Jersey. The products to be handled include white oils and petrolatum, and the company's odorless insecticide base oil, "Insecti-Sol." Stocks of Pennsylvania Refining products will be carried at the Joseph Turner plant which is located at Ridgefield, N. J. Sales for the territory will be in charge of P. J. LoBue of the Turner organization.

Cole New England Branch

Cole Chemical Co., Long Island City, N. Y. recently opened a New England branch at 83 Watertown Ave., Wollaston, Mass. on the outskirts of Boston. D. Stuart Pope is manager of the new branch. The Cole firm which recently moved to a new plant in Long Island City with 30,000 square feet of floor space, is now in full production at the new location, manufacturing a line of cleaners, solvents, bleaches, disinfectants, waxes, insecticides, and household ammonia. David D. Catts, head of the firm, states that their plant has been completely re-equipped and is able to produce and ship 25 tons of various products daily. In addition to manufactured items, Cole Chemical also acts as distributor on numerous chemical and allied items.

Offer New Floor Finish

"Warcote," a non-skid finish for floors, is a new product of Warren Refining & Chemical Co., Cleveland.

McK.&R. Repackage Antiseptic

McKesson & Robbins, Bridgeport, have repackaged "Antiseptic Solution 59." The new bottle, streamlined, has ribbed concave sides to provide sure grip.

"We Was Robbed, Too"

Safe crackers broke into the office and plant of the Chemical Supply Co., Cleveland, early last month, blew the safe and departed with the supply of stamps and petty cash on hand, according to a report from Henry Nelson, vice-president and general manager of the company. Apparently incensed at not finding large

Insecticide Manufacturers!

As a low cost spreader and emulsifying agent for insecticides, aqueous cattle sprays, sheep dips, disinfectants, etc., we suggest that you investigate the

NAPHTHENIC SOAPS
NAPHTHENIC ACID SLUDGES

(Mineral Oil Residues)

Let us send you specifications and further details . . . also a copy of a recent article in *Soap,* "Naphthenic Soap Emulsions," . . . giving valuable information to manufacturers of insecticides, disinfectants, polishes, etc.

Also "Flag Brand" White Mineral Oils - - - U.S.P. and Technical

—— ♦ ——

S. Schwabacher & Co., Inc.
25 Beaver Street New York

YOU HAVE A SPRAYING PROBLEM

35 G
3 QT. CAPACITY

33 G
3 QT. CAPACITY

43 G
3 QT. CAPACITY

ANSWER IT WITH ONE OR MORE OF THESE DOBBINS *SUPERBILT* SPRAYERS.

If the need is for a sprayer for over the counter sales or sales in connection with your product, Dobbins sprayers are sure to fill the bill.

Their many utility features, the general appearance, the high quality and performance assure the ready sale of your product and these fine sprayers.

35G—A high pressure sprayer with many patented features. Can be adjusted for special jobs and special products. The finest chemical sprayer on the market.

33G—A continuous sprayer with two-way nozzle. Develops a finely atomized spray.

43G—A double-duty sprayer that can be used continuously or as a high pressure sprayer.

No. 10—A handy floor oil sprayer with volume and atomization control. The most efficient floor oil sprayer manufactured.

Write for catalog and further information.

NO. 10
1½ GAL. CAPACITY

DOBBINS MANUFACTURING COMPANY
NORTH SAINT PAUL MINNESOTA

sums of cash in the safe, the robbers ransacked the entire office, damaging and destroying books and records. The loss is covered by insurance. Mr. Nelson when interviewed after the robbery, stated that he did not suspect any of his competitors in this particular job. The Chemical Supply plant is located on Canal Road in the downtown industrial district of Cleveland.

Penick Appoints Bruggeman

S. B. Penick & Co. have appointed Heinrich Bruggeman to act as general representative for the company in Latin America. This will not conflict with Mr. Bruggeman's association with Schimmel & Co., New York perfuming materials house, whom he has represented for the past 35 years.

Fuld Adds Perfumes

Fuld Brothers, Baltimore, sanitary supply manufacturers, recently announced the formation of a subsidiary to be known as Fuld Aromatics, A Division of Fuld Brothers. Operations will cover the production of certain aromatic chemicals and refining of certain essential oils. The new Fuld division will confine its activities exclusively to perfuming problems of the sanitary supply field. The parent organization has for several years been carrying on extensive experiments and developing equipment for supplying some of the perfuming materials used in the manufacture of its own products.

Household Insect Booklet

A 24-page booklet entitled "Some Common Household Insects and Their Control" has recently been issued by the Connecticut Agricultural Experiment Station, New Haven, Conn. The authors are Neely Turner and B. H. Walden of the Entomological Division of the Experiment Station. The booklet is undoubtedly one of the best of its type published on household insects and their control, containing a great deal of valuable and practical information. On the whole, the facts are in accord with those generally accepted in the insecticide industry, particularly in the matter of the correct products for control. However, in the matter of recommending the composition of a fly spray and the method of making it, Messrs. Turner and Walden make the same error as most other experiment stations and are at sharp variance with the views of entomologists and manufacturers in the insecticide industry. They recommend the adding and mixing, and later decantation, of 12 ozs. of ground pyrethrum flowers to a gallon of kerosene, which method has been much discredited. Their figure of 12 ozs. is also at variance with the Department of Agriculture which recently held that even a 16 oz. product (N.A.I.D.M. Official Control Insecticide) is of insufficient strength for ordinary use as a fly spray or general insecticide.

Down on the farm, two well-known entomologists look over the bull. After spraying him with stock spray, they find him free from flies and gentle as a lamb,—at least, so said the entomologists,—who are none other than Friar Thompson of Hercules Powder, and A. Edison Badertscher of McCormick & Co. (P.S. Doc Badertscher states said bull is of the pure, dyed-in-the-wool Angus variety.)

Entomologists Meet in Phila.

V. I. Safro, of Michigan Alkali Co., New York, was named as the new chairman of the Eastern Branch of the American Association of Economic Entomologists at the annual meeting held November 18 and 19 at the Walton Hotel, Philadelphia. He succeeds H. N. Worthley, retiring chairman. C. C. Hamilton is the new vice-chairman, with H. B. Weiss continuing as secretary-treasurer. Members in attendance at the ninth annual meeting heard a series of forty-five papers dealing with research developments in the field of agricultural insecticides. Among the papers of particular interest were the following: "Toxicity of Hydrogenated Pyrethrins I and II to the House Fly," by H. L. Haller and W. N. Sullivan, Washington, D. C.: "Absorption of Hydrocyanic Acid by Different Types of Insects" by E. L. Carpenter and William Moore, Stamford, Conn.; and "A Hot Dye Bath Method of Applying Mothproofing Solutions" by E. A. Back, Washington, D. C.

Offers Aqueous Germicide

Kovan Co., New York, is offering an aqueous germicide which is said to have a phenol coefficient when diluted 1 to 80 of 6.0 against *E. typhi* and 1.7 to *Staphylococcus aureus*. It can be supplied in either alkaline or acid mediums to be incorporated in soaps, pharmaceuticals and cosmetic products. The outstanding feature of this product is that, though highly antiseptic, it is relatively non-caustic and non-toxic.

Marvel Appoints Agency

Marvel Products Corp., Chicago, manufacturers of furniture and automobile polish, has appointed Lee R. McCullough, Chicago, as advertising agency.

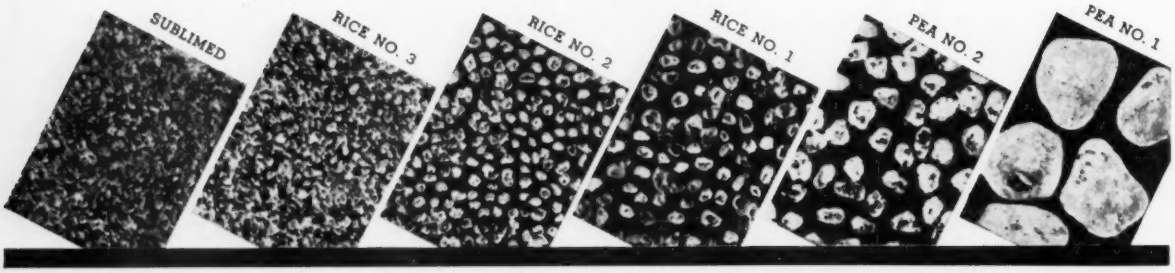
DERRIS, INC.

79 WALL STREET
NEW YORK CITY

SPECIALISTS IN STANDARDIZED DERRIS POWDER, CUBE POWDER, AND ALL ROOT DERIVATIVES USED IN HOUSEHOLD, HORTICULTURAL AND AGRICULTURAL INSECTICIDES

HOOKER PARADI

REG. U.S. PAT. OFF.



Hooker Paradichlorbenzene is pure, accurately sized, clear, bright and free-flowing. Available in six standard sizes and special sizes if required.

HOOKER ELECTROCHEMICAL COMPANY
Eastern Sales Offices: Lincoln Bldg., New York City; Works: Niagara Falls, N. Y.
Western Sales Offices: Tacoma, Wash.; Works: Tacoma, Wash.

7725

Floor Wax Makers to Meet

A meeting of floor wax manufacturers has been called for 10:00 A.M., December 8, at the Hotel Biltmore, New York, under the auspices of the National Association of Floor Wax Manufacturers. The meeting will follow immediately after the close of the annual convention of the National Association of Insecticide and Disinfectant Manufacturers, and has been timed so that a representative attendance of wax manufacturers from all over the country will be possible. Among topics scheduled for discussion are the following:

Lower freight rates for floor waxes;

Improved standards for raw materials, and

Information on taxes on raw materials by exporting countries with view to determining what action, if any, may be taken to bring about modifications?

Full particulars about the meeting may be obtained by addressing J. E. Stevens, 381 Fourth Ave., New York, acting secretary.

Dobbins Adds to Plant

Dobbins Manufacturing Co., North St. Paul, Minnesota manufacturer of sprayers, has just completed an addition to its plant. The new building is 66 - 110 ft. of steel and concrete construction and will be used for warehouse purposes. The Dobbins firm has been showing steady growth and this is the third addition to manufacturing facilities in the last three years. I. O. Altenberg is the new production manager of the company. Mr. Altenberg is a veteran of more than sixteen years experience in the manufacture of sprayers.

New Deodorizing Device

A new patented deodorizing device for use in lavatories, washrooms, etc., and as a perfume disseminator for restaurants, hotels, stores, offices, is being marketed by the Carter Sanitary Supply Co. of 613 Central Ave., Cincinnati. The deodorizer is made of metal and is available in chrome or cadmium finish. It consists of a circular shell in the top half of which are longitudinal openings. Inside is a metallic well with circular wick attachment, the well holding about a pint of fluid. One filling of deodorizing liquid lasts a month. The device is attached to the wall or elsewhere with ordinary screws. It is filled through an opening in the top with a small funnel. The Carter Company is the owner of the patents. (See pg. 125 for photo.)

Churchill Mfg. Co. Moves

Churchill Manufacturing Co., soaps and disinfectants, has moved its general offices and main factory to So. Chambers and Knox Streets, Galesburg, Ill. They were formerly at 309 Douglas St., Sioux City.

Randall Joins McCormick

Richard H. Randall, formerly district sales manager for Procter & Gamble Distributing Co. at Baltimore, has joined the sales staff of McCormick Sales Co. that city.

Offer New Waterproof Waxes

T. F. Washburn Co., Chicago, is now manufacturing two new water proof waxes, "Chrystal-Brite" and "Mirra-Gloss." Complete information regarding these two new products is contained in a new eight page folder, "Wax Facts." This folder is available to jobbers and distributors.

Northwestern Assn. Meets

At a meeting of the Northwestern Association of Exterminators and Fumigators held at Minneapolis early in November, group listing in the classified telephone directory for the entire association, and cooperation among members on personal liability insurance coverage were decided upon.

Silverstone Chemical Moves

Silverstone Chemical Co., sanitary supply firm, formerly at 5555 Pershing Ave., St. Louis, has moved to 5673 Waterman St., that city.

G. E. Laboratories, Shamokin, Pa., will shortly start the manufacture of insecticides and liquid waxes of the rubless type. This concern, headed by Roy J. Troutman, has recently moved into a new three story cement building in anticipation of the expansion of its line. Present products manufactured include "Troutman's" cough syrup and "Troutman's" imitation vanilla flavor. Ample space and facilities will be available in the 7,000 square feet of the new plant for the company's entrance into the insecticide and wax field.

Announcing
the new supply source for

- **ESSENTIAL OILS**
- **COMPOUNDS**
- **PERFUMES**

for { **PARA BLOCKS**
NAPTHA BLOCKS
FLY SPRAYS
LIQUID SOAPS

FULD
AROMATICS
Division of Fuld Bros.
702-710 SOUTH WOLFE STREET
BALTIMORE MARYLAND

SPECIALTY SOAP PRODUCTS

Liquid Soap Base
Potash Oil Soap
Liquid Soap
U. S. P. Green Soap
Auto Soaps
Shampoo
Pine Oil Soap
Shampoo Base
U. S. P. Cresol Compound
Coal Tar Disinfectants
Pine Oil Disinfectants
Insecticides
Liquid Floor Wax

We manufacture for the trade only

HARLEY SOAP CO.,
2852 E. Pacific St.,
Philadelphia, Pa.

Ask for samples of above specialty bulk products.

We can sell you
POLISH
cheaper than you can make it!

For Instance
A NON-INFLAMMABLE CREAM METAL POLISH
That Won't Settle or Separate.
Will Meet State or Federal Specifications.

Of course we'll send you samples. Just let us know where to.

SOLARINE COMPANY
Baltimore, Md.
Metal Polish Specialists For Nearly Half a Century

Everything for the
Professional Exterminator

Here are a few of our specialties:

Restaurant Roach Powder—non-poisonous . . . does not lose its strength when applied. Packed in 10, 25, 50, 125 and 300 lb. lots.

Mouse Seed—Packed in lots of 500 lbs., 100 lbs., 50 lbs. and 25 lbs.

Rat Glue—for making Rat Boards. We also supply Rat Boards already made up.

Kill-A-Smell—for destroying odor of dead rats.

Bed-Bug Concentrate—A special formula which has proven itself capable of dealing with the most troublesome infestations.

Black Magic Paste—Kills rats and mice when everything else fails.

Exterminating Materials Co.
710 Amsterdam Ave. New York, N. Y.

Sanitary Products Firms Exhibit At Hotel Show

SOAP and sanitary products manufacturers were well represented at the twenty-second annual National Hotel Exposition held at the Grand Central Palace, New York, Nov. 15th to 19th. Attractive displays of soaps, cleaners, janitor supplies, carpet and rug cleaners, and insecticides drew many interested visitors. Officials estimated a total attendance of 50,000. The following manufacturers of soaps and sanitary products had booths:

John T. Stanley Co., New York. H. S. Cook in charge of the booth. In addition to the display of the company's products, added attraction was provided by an artist who made lightning pencil sketches of visitors to the booth.

J. B. Ford Co., Wyandotte, Mich. L. D. Dodson in charge of the booth, featuring "Wyandotte Keego Cleaner," a water softener and cleanser for dishes, glasses, silver, and culinary equipment.

Long Island Soap Co., Brooklyn. Alexander Baar and George Steiner in charge of the booth, in which was displayed a general line of soaps, cleansers, and janitor supplies.

West Disinfecting Co., Brooklyn. J. A. Martinka in charge of the booth, displayed the West line of insecticides, disinfectants, drip machines, automatic vending machines, and liquid soap dispensers. Prominently displayed, also, was the "West Sanitor," electric steam vaporizer.

Hild Floor Machine Co., Chicago. C. W. Willets in charge of the booth, showed the "Hild" floor machine, carpet cleaning equipment and dyeing machine.

Capitol Chemical Co., Washington. Richard W. Gamble in charge of the booth, demonstrated the effectiveness of its line of insecticides through the use of an indirect fog machine. Killing Tests were run on flies in this modification of the Peet-Grady Testing Chamber. The machine was a duplicate of one used to develop the standards adopted by the U. S. Navy.

Ovex Chemical Co., New York. N. H. Gregory in charge of the booth, in which the "Ovex" line of insecticides, industrial deodorants, plant and cattle sprays, and detergent powders was displayed.

Continental Car-Na-Var Corp., Brazil, Ind., displayed its floor products, floor machines, rug and carpet cleaners.

Kent Co., Rome, N. Y. Gordon Kent in charge of the booth, showed the "Kent" line of floor machines.

Continental Detergent Co., New York. H. Kay in charge of the booth demonstrated its cleaning equipment with samples of soiled and cleaned upholstery, rugs, and carpets.

◆

Drug Section Nominates

The annual meeting and election of the Drug, Chemical and Allied Trades Section of the New York Board of Trade was held Tuesday evening, Nov. 16, at the Hotel Pennsylvania, New York. A report of the nominating committee giving the slate of new members of the executive committee for the year 1937-38 was approved. Those nominated, from which 16 will be elected at a subsequent meeting, were the following:

Carl M. Anderson, Merck & Co.; W. D. Barry, Mallinckrodt Chemical Works; R. F. Berls, McKesson & Robbins; Turner F. Currens, Norwich Pharmacal Co.; James DeCesare, Health Products Corp.; M. N. deNoyelles, Chas. Pfizer & Co.; P. M. Dinkins, American Cyanamid Co.; Ralph E. Dorland, Dow Chemical Co.; David L. Kaltman, D. Kaltman & Co.; Charles E. Kelly, Hagerty Brothers & Co.; Elvin H. Killheffer, E. I. duPont deNemours & Co.; H. M. Kirkham, Upjohn Co.; Robert B. Magnus, Magnus, Mabee & Reynard; Paul Miller, International Cellucotton Products Co.; S. B. Penick, Jr., S. B. Penick & Co.; George Simon, Heyden Chemical Corp.; J. J. Toohy, E. R. Squibb & Sons; Stanley Williamson, Union Carbide & Carbon Corp.

◆

Dyas to S. B. Penick

C. S. Dyas has been engaged by S. B. Penick & Co. to direct the operations of their South Elgin, Ill., plant, which was acquired in their recent purchase of the Murray & Nickel Manufacturing Co. Mr. Dyas' experience covers a period of 25 years activity in production and analytical work. He is a graduate of Northwestern University with the degrees of Ph. G. and Ph. C.

◆

Anchor to Buy Hocking Glass

Stockholders of Anchor Cap Corp., L. I. City, N. Y., have received a request for proxies from I. R. Stewart, president, to authorize the purchase by Anchor Cap of Hocking Glass Co. for 441,852 shares of Anchor's common stock, and to change the name of the combined company to Anchor Hocking Glass Corp.

◆

Monsanto Wins Award

Monsanto Chemical Co., St. Louis, has been given the "Award for Chemical Engineering Achievement" for 1937. This Award was instituted by *Chemical & Metallurgical Engineering* in 1933 to stimulate a broader participation of chemical engineers in the affairs of industry, and to honor that company which has contributed most to the advance of the chemical industry and chemical engineering profession. In making the 1937 Award the Committee stated that consideration was given primarily to the successful design, construction and operation of the phosphorus producing plant built this year near Columbia, Tenn.

MERRY XMAS

and a

PROSPEROUS

NEW YEAR

TO OUR MANY FRIENDS

FROM COAST TO COAST

MICHEL EXPORT COMPANY
Incorporated
95 BROAD STREET, NEW YORK, N.Y.
Specialties for the
Manufacturing Chemical Industries

MAR MIC PRODUCTS

Alkalies
Trisodium Phosphate
Carbon Tetrachloride
and other
Chemicals

Our intimate knowledge of chemical markets and manufacturing sources enables us to supply chemical consumers, both large and small, at a distinct saving. Let us work on some of your requirements.

JOHN A. CHEW
INCORPORATED
60 East 42nd Street New York
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PALE CRESYLIC ACID
ALL GRADES

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HIGH BOILING
TAR ACIDS

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CRESYLIC CREOSOTE

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MIRVALE CHEMICAL CO., Ltd.
MIRFIELD YORKS, ENG.

Satisfy Yourself
THAT
Valencia Pumice
Reg. U. S. Pat. Off.

A New All-American Product is equal to imported Pumice. That is our claim and we invite you to put it to any test you like.

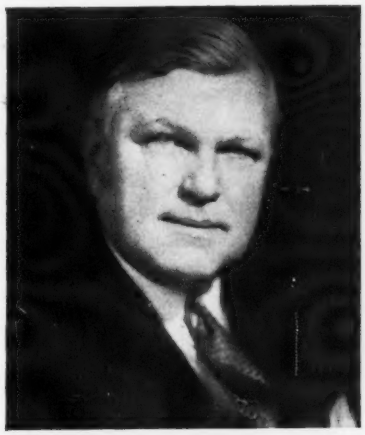
YOU BE THE JUDGE.

Complete information and samples sent on request.

BARNSDALL TRIPOLI CORPORATION
PUMICE DIVISION
(Subsidiary Barnsdall Oil Co.)
SENECA, MO., U. S. A.
Oldest and Largest Producers of True Tripoli in the World.

Hercules Appoints Kolb

Hercules Powder Co., Wilmington, has appointed Harry F. Kolb as director of purchases to



Ralph B. McKinney

succeed Ralph B. McKinney, effective Dec. 1. Mr. McKinney has been assigned to special duties with the Paper Makers Chemical Division of the company, and will continue to be located in Wilmington.

Brazil Bumper Wax Crop

Brazil has produced another bumper harvest of carnauba wax in 1937, according to reports from the Chemical Division of the United States Commerce Department, at Washington. Estimates place the crop at around 10,000 metric tons, which is about the same as during the two preceding years. Exports from Brazil during the first eight months of 1937 totaled 6,029 metric tons, the largest amount for any similar period in a number of years. The United States received 70 per cent of this. Great Britain, France and Germany were next most important purchasers. Exports will probably be further stimulated because of the recent decree of the Brazilian Government reducing from 35 to 20 per cent the quota of exchange arising from exports of carnauba wax which must be delivered to the Bank of Brazil at the lower official exchange rate. Imports into the United States during the first eight months of 1937 totaled 11,468,000 pounds, value $3,941,000. This compares with 9,684,000 pounds imported in the same period of 1936, value $3,347,000.

Teaseed Cake As Insecticide

The Chinese have found that teaseed oil cake makes a very effective insecticide. This is one of the chief uses for teaseed oil cake at present in China. The cake is broken up and boiling water poured over it. When the mixture has cooled it is sprinkled over the ground or plants. Unless an excessive quantity is used, it has no harmful effect upon plant life.

Mexico Imposes Wax Duties

Mexico has imposed an export duty of 0.40 peso per gross kilo on vegetable waxes, including candelilla wax, formerly exempt from payment of export duty. The new duty was imposed to encourage producers of vegetable wax to form a cooperative organization. Part of the duty is to be returned, in the form of a subsidy, to producers exporting through the cooperative.

McCormick to Address SAM

Charles P. McCormick, president, McCormick & Co., Baltimore, will address the Society for the Advancement of Management Friday afternoon, Dec. 10, during their annual conference at the Hotel New Yorker, New York, Dec. 6 to 11. His topic will be "Multiple Management."

M. M. & R. Honors W. F. Fischer

William F. Fischer, sales manager for Magnus, Mabee & Reynard, Inc., New York essential oil firm, was guest of honor at a testimonial luncheon given by his associates Nov. 17. The occasion was the celebration by Mr. Fischer of completion of his thirtieth year with the company. He was originally employed by Percy C. Magnus, Sr., father of the present head of the company, as office boy. He advanced through the accounting, sales and purchasing departments to his present position as sales manager. When he first joined the firm, the organization consisted of only twelve or fourteen employees, with three field representatives. The staff now numbers around eighty, with twenty-four field representatives covering the entire country. P. C. Magnus, president of the company, who was Mr. Fischer's successor as office boy in their early days with the concern, acted as toastmaster at the luncheon and presented the guest of honor with a substantial check in token of the company's regard for his services. A number of Mr. Fischer's close friends from the industry were present to add their good wishes to those of his associates.

William F. Fischer, sales manager for Magnus, Mabee & Reynard, Inc., New York, was feted by his business associates and friends at a luncheon, November 17, marking the completion of his thirtieth year of service with the company. Mr. Fischer's first position with the company was that of office boy.

Always Uniform

Today . . . a year from now, your first order or your 100th order, NIMCO LANOLIN never varies. Write for a testing sample today,—note its light color, sweet odor and smooth texture. Try it and see the improvement.

Stocks Carried in CHICAGO • KANSAS CITY MINNEAPOLIS

N. I. MALMSTROM & CO.
147 LOMBARDY ST., BROOKLYN, N. Y.

Refined FROM SELECTED WOOL GREASES
NIMCO LANOLIN
ANHYDROUS and HYDROUS, U. S. P.

A new floor wax

for the janitor supply and jobbing trades which is

waterproof

and which gives a

high gloss

ZIP-ON WAX

Dries very bright and becomes water resistant as soon as dry. Wax content guaranteed 100% Carnauba. Supplied in bulk, or with your label in any size container.

Shawmut Specialty Co.
91 Bickford St. **Boston**

Ask about our new PINE NEEDLE SCRUB SOAP. Something different and better.

END BLIND SPOT

SPRAYING WITH

LOWELL NU-ACTION SPRAYERS

The blind spot in sprayers is that area between the poorly atomized drops without killing power.

The LOWELL NU-ACTION SPRAYERS send a high powered finely atomized mist that produces a compact spray of uniform killing power. The blind spot is eliminated.

The diagram shows poorly atomized spray, notice the wasted blind spots—and compare with solid atomized mist in NU-ACTION sprayers!

Sprayer experts and just ordinary folks are more than enthusiastic over these new sprayers. Send for further details.

LOWELL MANUFACTURING CO.
North Pier Terminal, Opp. Navy Pier, Chicago
Chicago, Ill. Lowell, Mich.

MECHLING BROS. CHEMICALS

CAMDEN, N. J. BOSTON, MASS.

BC SINCE 1849

SILICATE DE SODA

DIVISION OF GENERAL CHEMICAL COMPANY

Associated Exterminators Meet

A regular meeting of the Associated Exterminators and Fumigators of New York was held the evening of November 30th at association headquarters, 7 West 44th St. W. J. Parker, new association secretary, gave a talk on a proposed "Liquidated Damage Agreement" by which it is planned to regulate fair trade practices in the exterminating and fumigating industries. Practices which it is proposed to deal with are: unethical advertising, bribery, false representations affecting existing contracts, unfair attempts to induce breach of contracts, unfair labor practices and sales below cost.

Insecticides in Uruguay

By a presidential decree, no manufacturer, importer or agent may sell insecticides or fungicides in Uruguay without first obtaining a permit. If the insecticides are imported, the application for permit must be accompanied by a sample taken by the sanitary inspector of the Port of Montevideo, an indication of the chemical composition, instructions for use, commercial mark and statement of country of origin. Insecticides for sale must bear the name or trademark of the manufacturer, declaration of chemical content, net weight, and label of country of origin. A fee of 25 pesos must be paid when solicitation for registry is presented, and will not be refunded if the solicitation is denied.

Unico Products Corp. Moves

Unico Products Corp., New York, sanitary supplies, has moved to larger quarters at 519 Hudson St.

Phila. Exterminators Meet

A luncheon meeting of representatives of Philadelphia exterminating firms was held at the Hotel Sylvania, November 19, at which the chief topic of discussion was the new Pennsylvania law setting a maximum work week of forty-four hours. One provision of the law, that providing that no person may work more than eight hours in any twenty-four, will work a particular hardship on the exterminating and fumigating trades, in the opinion of many Philadelphia firms. In this connection the state has been asked for an exception in view of handicaps that would be involved in cases of fumigation and other emergency work.

Offers Exterminator Prize

To the person who suggests a new, more suitable and descriptive name for the present title of "exterminator," Charles F. Opitz, president of John Opitz, Inc., Long Island City, N. Y., is offering a prize of $50 cash. The plan for the contest is to have the award made in cooperation with the National Pest Control Association. The judges for the contest will be: Thomas Johnson, publicity director of Purdue University, Lafayette, Ind.; Professor J. J. Davis, chief of the Department of Entomology of Purdue University; H. K. Steckel, president of the National Pest Control Association; Al Cossetta, editor of *Exterminators Log;* and Ira P. MacNair, editor of *Soap.* Details of the contest will be announced shortly in a general bulletin to the industry. The award will be made during the second annual Purdue conference for pest control operators to be held at Lafayette, Indiana, January 17 to 21.

Charles F. Opitz

Pittsburgh P.C.A. Elects Witt

Harry L. Witt of Harry L. Witt & Co., has been elected the first president of the newly formed Pittsburgh Pest Control Association.

Prof. Exterminators to Meet

There was no regular meeting of the Professional Exterminators Association during October in order to avoid possible conflict with the recent meeting of the National Pest Control Association in Memphis. In view of the many holidays in November, it was also decided to cancel the usual meeting for that month. The next meeting of the group will be in December and plans are being made now by the officials of the organization for this affair. Effective August 1st, dues of the Professional Exterminators Association were reduced to $1.50 per month and the initiation fee was lowered to $5.00.

N.P.C.A. Committee Reports

The convention committee of the National Pest Control Association is recommending Omaha as the convention city for the 1938 meeting of the organization which will be held October 24 to 26. Members of the convention committee include Walter S. McCloud, Chicago, Charles Houghton, Boston, and Lawrence A. McKenna, Cleveland.

Elkay Adds Liquid Soap

Elkay Products Co., New York, has added a complete line of liquid toilet soaps to its list of products. The concern manufactures polishes, deodorant blocks, insecticides, etc. Offices were recently moved to 323 West 16th St.

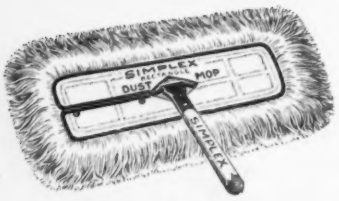
O. M. Fish Joins Fishbeck

Charles Fishbeck Co., New York, essential oils and aromatic chemicals, has added Ozro M. Fish to its Chicago sales staff. Headquarters will be in the Wrigley Building with Davis & Davis, Chicago representatives of the concern.

New "Weed" Developed

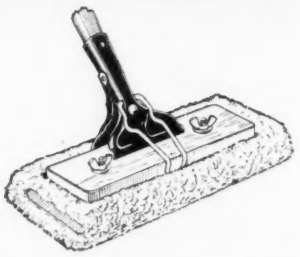
A daughter, Susan Elizabeth Weed, was born November 21 in the Lying-in Hospital, New York, to Dr. and Mrs. Alfred Weed. Dr. Weed is chief entomologist for John Powell & Co., New York, insecticide raw material house.

SIMPLEX DUST MOP — HOLZ-EM WAX APPLICATOR



The SIMPLEX is the newest, most practical and economical thing in dust mops—a strong unified wire frame with a swivel handle and *a mop that comes off to wash.* Available in several sizes.

The HOLZ-EM has long been acknowledged as the best for applying and spreading liquid wax, varnish, seals and other floor finishes. Sheep wool pads are washable and easily replaced.



AMERICAN STANDARD MFG. CO., 2509 SO. GREEN STREET, CHICAGO

F. & S.

Quality Colors
for
TOILET SOAPS
LIQUID SOAPS
TOILET PREPARATIONS

Long experience enables us to produce colors for all types of soaps.

If you have a shade you want matched send us a sample. We have complete facilities for matching.

Liquid soap colors a specialty—send for samples of F. & S. greens and ambers.

FEZANDIE & SPERRLE, Inc.
205 FULTON STREET
NEW YORK, N Y.
Import—Manufacture—Export

Best Wishes
for a
Merry Christmas
and a
Happy New Year

COMPAGNIE PARENTO, Inc.
CROTON-ON-HUDSON, N. Y.
NEW YORK CITY DETROIT CHICAGO
LOS ANGELES SAN FRANCISCO
SEATTLE PORTLAND, ORE TORONTO

SOAP DIES and STAMPS

—for—
TOILET SOAPS
LAUNDRY SOAPS
BATH TABLETS
STAMPING

For Foot and Power Presses

Manufacture Backed by 35 Years' Experience

ANTHONY J. FRIES

717 Sycamore Street **Cincinnati, O., U. S. A.**

Folder on Water Softener

Creative Chemical Co., Pittsburgh, has just issued a folder describing "Watertone," a chemical compound for softening water. "Watertone" is said to be an amber colored liquid, odorless, soluble in water in all proportions, and does not impart a color to the treated water. Copies are available on request.

Deny Macleans Purchase Story

Proposed purchase by Sterling Products Co., Wheeling, W. Va., of the big British toilet products business of Macleans, Ltd., is reported to have been abandoned as a result of the recent sharp decline in the security market. H. G. L. Lazell, secretary of Macleans, however, states that the deal was never "on," so could not be "off." Various offers have been made to ordinary shareholders from time to time, but Mr. Lazell declares that no negotiations have ever taken place.

FSCC Asks Purchase Offers

The U. S. Federal Surplus Commodities Corporation has invited offers from American refiners and processors for the purchase and processing of cottonseed oil. Contract forms were mailed out recently, and refiners and processors wishing to buy and process cottonseed oil for the FSCC were to return the contracts, filled in, in time to be opened by FSCC in Washington on November 22. Contracts must show the maximum quantities the refiners wish to process and store. The Corporation will determine from time to time the prices which refiners must pay for the crude cottonseed oil purchased, and the quantities which they may handle.

Soap Sales to Puerto Rico Up

Puerto Rico, which buys more soap from manufacturers in the United States than any foreign country, increased its purchases still further during the last fiscal year, according to the Puerto Rican Trade Council. Sales totalled $1,208,000, about 40 percent of exports from the United States to all foreign countries combined. In quantity, the Island's purchases in the fiscal years 1936-37 were the largest of all time, totalling 25,700,000 pounds. Tonnage has increased about ten-fold since Puerto Rico became a part of the United States in 1898.

Laundry soap accounts for more than two-thirds of the Island's annual soap purchases, shipments in the last fiscal year exceeding 22,000,000 pounds. Sales of powdered and flaked soap amounted to 1,200,000 pounds, and toilet and fancy soap totalled 1,100,000 pounds. Business conditions in Puerto Rico at the present time are favorable, according to the Council, and manufacturers of soap in the United States can look for a continued good demand during the next few months.

Continuous Oil Extraction

An apparatus for the continuous extraction of oils and fats by the wet method consists, in series, of a screw which divides the material up fine and places it under pressure, a heater with a rotor to cause rapid heating of the material, a pump to increase the pressure, a second heater, a vessel in which destruction of the material takes place under pressure but without the addition of heat, a reducing valve for suddenly lowering the pressure and a cyclone which blows the material from the valve, evaporates it and separates it into its components. Aage Nyrop. Danish Patent No. 53,328.

New McCormick Display

McCormick Sales Co., Baltimore, has just introduced a new display container for "Bee Brand" insecticides. It is designed to contain their full line, and when the lid is removed a rising platform brings them into view for the convenience of the buyer. When closed the display has a place on the lid for a spray gun.

Soap Sprays on Plants

A 0.25 per cent solution of potassium coconut oil soap caused no injury to blossoms or foliage of a number of greenhouse, garden, ornamental and orchard plants; 0.5 per cent solutions produced no injury of foliage, stems or buds, but did injure delicate flowers. One per cent concentrations were not injurious to orchard trees but injured many greenhouse and garden plants, while 2 per cent concentrations injured most of the plants tested. Joseph M. Ginsburg and Clayton Kent. *J. N. Y. Entomol. Soc.* 45, 109-13 (1937)

H. L. Lonsdale Dies

H. L. Lonsdale, of Phoenix Metal Cap Co., died recently after a brief illness. He had been associated with Phoenix Metal Cap Co. since 1922, and had long been active in the affairs of the Glass Container Association.

The National Pest Control Association has just adopted the new emblem illustrated, for use by its members. Electros may be obtained through the office of the secretary, William O. Buettner, 3019 Fort Hamilton Parkway, Brooklyn.

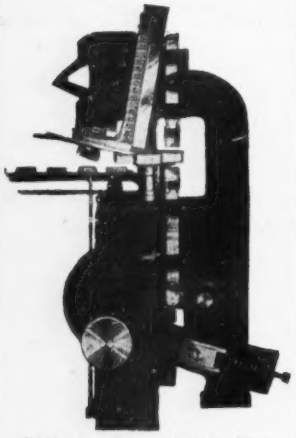
MEMBER
NATIONAL
PEST CONTROL
ASSOCIATION

Special Offerings of

New CRUTCHERS

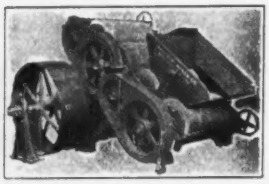
This Newman brand new, all steel, steam jacketed soap crutcher will crutch any kind of soap. We also build another crutcher especially adapted for laundry soap.

Automatic JONES PRESS



Small size fully automatic Jones toilet soap press. Capacity 150 to 200 small cakes per minute. A real buy at an attractively low price. Has been completely rebuilt in our shops.

H-A SOAP MILL



This 4-roll granite toilet soap mill is in A-1 shape. Latest and largest size rolls. Priced for quick sale.

New and Rebuilt

SOAP MACHINERY

by

NEWMAN

We carry a complete line of equipment for the soap and sanitary products industry. All used equipment is rebuilt in our own shops and is guaranteed to be in first class condition. All new equipment that we manufacture such as crutchers, frames and cutting tables is of the finest material and workmanship. You can buy with confidence from Newman.

USED SPECIALS

For the Soap, Chemical, Cosmetic and Allied Trades

H-A, 1500, 3000, 4000, 5000 lbs. capacity. Steam Jacketed Crutchers.

Dopp Steam Jacketed Crutchers, 1000, 1200, 1500 lbs. and 800 gals. capacity.

Ralston Automatic Soap Presses.

Scouring Soap Presses.

Empire State, Dopp & Crosby Foot Presses.

2, 3, 4, 5 and 6 roll Granite Toilet Soap Mills.

H-A 4 and 5 roll Steel Mills.

H-A Automatic and Hand-Power slabbers.

Proctor & Schwartz Bar Soap Dryers.

Blanchard No. 10-A and No. 14 Soap Powder Mills.

J. H. Day Jaw Soap Crusher.

H-A 6, 8 and 10 inch Single Screw Plodders.

Allbright-Nell 10 inch Plodders.

Filling and Weighing Machine for Flakes, Powders, etc.

Steel Soap frames, all sizes.

Steam Jacketed Soap Remelters.

Automatic Soap Wrapping Machines.

Glycerin Evaporators, Pumps.

Sperry Cast Iron Square Filter Presses, 10, 12, 18, 24, 30 and 36 inch.

Perrin 18 inch Filter Press with Jacketed Plates.

Gedge-Gray Mixers, 25 to 6000 lbs. capacity, with and without Sifter Tops.

Day Grinding and Sifting Machinery.

Schultz-O'Neill Mills.

Day Pony Mixers.

Gardiner Sifter and Mixer.

Proctor & Schwartz large roll Soap Chip Dryers complete.

Doll Steam Jacketed Soap Crutchers, 1000, 1200 and 1350 lbs. capacity.

Day Talcum Powder Mixers.

All types and sizes—Tanks and Kettles.

Ralston and H.A. Automatic Cutting Tables.

Soap Dies for Foot and Automatic Presses.

Broughton Soap Powder Mixers.

Williams Crutcher and Pulverizer.

National Filling and Weighing Machines.

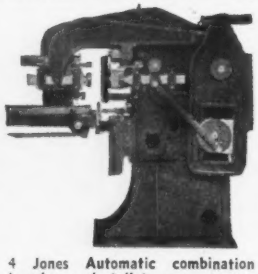
Send us a list of your surplus equipment—we buy separate units or complete plants.

Newman Tallow & Soap Machinery Co.

1051 W. 35th St., Chicago, Illinois

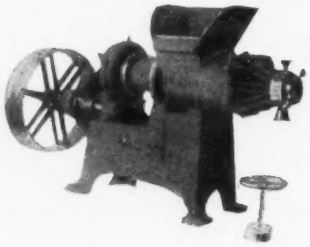
Our forty years soap experience can help solve your problems.

JONES AUTOMATIC



4 Jones Automatic combination laundry and toilet soap presses. All complete and in perfect condition.

SINGLE SCREW SOAP PLODDER



Single screw soap plodders with 6, 8, 10 or 12 inch screws. All completely rebuilt and unconditionally guaranteed.

CLASSIFIED ADVERTISING

Classified Advertising—All classified advertisements will be charged for at the rate of ten cents per word, $2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, $1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of *Soap*, 254 West 31st St., New York.

Positions Wanted

Analytical chemist and soapmaker, specialized in laundry and dry cleaning soaps, detergents, polishes and disinfectants, with long years of experience, wishes new connection. Address Box No. 336, care *Soap*.

Experienced and established Salesman: Wants complete line toilet, laundry and industrial soaps, powders and chips; also cleanser in cans, for exclusive distribution in Michigan State. Address Box No. 335, care *Soap*.

Laundry Supply Salesman—High type salesman, extensive following among large laundries and jobbers in Greater New York, open for proposition as representative. Fifteen years' experience. Best references. Soaps preferred. Address Box No. 333, care *Soap*.

Young Men—Two young men seeking positions, one (30 yrs. old) a graduate chemical engineer, the other a high school graduate (21 yrs. old) with chemical and drug store experience. Further details from the Editor of *Soap*. Will do any type of work to break into new position.

Soap Chemist—Thirty, with ten years' experience in all branches of factory and laboratory work; has thorough knowledge of manufacturing all types of household, toilet, specialty and shaving soaps. Willing to go anywhere. Address Box No. 322, care *Soap*.

Positions Open

Nationally known manufacturer of sanitary chemicals has opening for salesman who can produce. Call on jobbers and Janitor supply houses. Attractive salary and bonus. Address Box No. 334, care *Soap*.

Wanted: Salesman by old established firm on Pacific Coast. Salesman who can sell high class exterminating service and products. Character references essential. Salary-commission. Give full particulars in answer. Confidential. Address Box No. 337, care *Soap*.

You Are Invited

to our

20th Birthday Party

DURING CHEMICAL SHOW WEEK

DECEMBER 6th to 10th

Hotel Lexington — Suite 1403-4

48th Street and Lexington Ave., N. Y. C.

Opposite Grand Central Palace.

Visit our Rebuilding Shops and Storeyards covering 8 acres at 335 Doremus Ave., Newark, N. J. —only 30 minutes away.

Inspect our large stock of SOAP MACHINERY

CONSOLIDATED PRODUCTS CO., INC.

15-21 PARK ROW — NEW YORK, N. Y.

BArclay 7-0600 — Cable Address: Equipment

We buy your idle Machinery—Send us a list.

FOR SALE

1—Anderson No. 1 Motor Driven Expeller, with Tempering Apparatus, Screw Feeder, Foots Elevator, Etc.

REBUILT SPECIAL OFFERINGS

1—Proctor Soap Chip Dryer.
2—Soap Boiling Kettles, 10 & 20,000 lbs. capacities.
1—Ralston Automatic Soap Press.
1—Jones Automatic Pin Die Press.
1—Automatic Soap Wrapping Machine.
1—2-way Soap Cutting Table.
1—Soap Grinder.
4—600 lb. Soap Frames.
20—1200 lb. Soap Frames.
2—4 Roll Granite Stone Mills, motor driven.
4—Filter Presses — Lab. to 36" Square.
3—Jacketed Vertical Crutchers up to 3600 lb. capacity.
2—Vertical Steel Jacketed 3000 lb. Kettles.
6—Glass Lined Kettles, 50 to 3000 Gals.
1—Soap Slabber.
2—Houchin-Aiken Empire State Foot Presses.
4—Plodders, 6"—8"—10".
2—Steel 3 Roll Mills.

Hydraulic Presses, Pumps, etc.

Send for Bulletin No. 101 giving full listings.

We Buy Your Surplus Equipment for Cash, From Single Items to Complete Plants.

STEIN EQUIPMENT CORP.

426 BROOME STREET — NEW YORK, N. Y.

Phone: CAnal 6-8147 — Cable Address "MACHEQUIP"

Special Grades of
Coconut Fatty Acids
for

TOILET SOAPS
SHAMPOO SOAPS
SHAVING CREAMS

Also a complete line of Vegetable and Animal Oils Fatty Acids

WECOLINE PRODUCTS, Inc.
15 EAST 26th ST. NEW YORK

We announce development of new type soap colors

PYLAKLORS

They have good fastness to alkali, light, tin, ageing.

The following shades are already available:

Bright Green	Dark Brown
Olive Green	Palm Green
Yellow	Golden Brown
True Blue	Violet

It will pay you to send for testing samples.

PYLAM PRODUCTS CO., INC.
Manufacturing Chemists, Importers, Exporters
799 Greenwich St. New York City
Cable Address: "Pylamco"

TALLOW
LARD OIL
NEATSFOOT OIL
ANIMAL STEARINE
ACIDLESS TALLOW OIL

Prompt Delivery—Drums, Barrels, or Tank Cars.

INDEPENDENT MANUFACTURING CO.
Bridesburg P. O. Philadelphia, Pa.

Push Button Control . . .
with the new HUBER
ELECTRO-PERFECTION CRUTCHER

The greatest advance in crutcher construction in recent years. Electrically driven, two speed and reverse crutcher. Built in 3 sizes:—1500, 2400 and 3200 pounds.

HUBER MACHINE CO.
"Builders of Good Soap Machinery for the Past 45 Years"
265 46th STREET BROOKLYN, N. Y.

Representative wanted by manufacturers of pyrethrum extract. Opportunity for good salesman to become the number one man in a growing organization. Address Box No. 338, care *Soap.*

A Prominent Manufacturer of liquid soaps, disinfectants, deodorizing cakes, etc., has an opening for a dependable sales representative. Address Box No. 339, care *Soap.*

Two openings available for salesmen, Gentiles preferred, experienced in the sale of janitor supplies, or disinfectants, liquid soaps, and sanitary products in the northern half of New Jersey. Salary, expenses and commissions will be paid to the right men. Established business will be turned over to the men selected. Address Box No. 323, care *Soap.*

Salesman Wanted:—High type man who has had some years experience in contacting the insecticide, drug and cosmetic manufacturing trades. An opening exists with a large well-rated company for the right man with the proper background. Address Box No. 321, care *Soap.*

Miscellaneous

For Sale—Opportunity to become a part owner and stockholder in Continental Carnavar Corporation of Indiana. Private party wishes to sell his holdings in this company. Address Box No. 320, care *Soap.*

Soap Wanted for needy children in the Southern mountains by the "International Save the Children Fund," 1 Madison Ave., New York City. This organization supplies clothing, food and other necessities free of cost. Any contribution of soap you may care to send can be forwarded to them at the above mentioned address.

Floor Brushes—We manufacture a very complete line. Catalogue sent upon request. Flour City Brush Company, Minneapolis, Minn., or Pacific Coast Brush Co., Los Angeles, Calif.

Janitor Supplies: Firm with considerable local following in eastern states on janitor supplies, is anxious to handle one or two specialty items for this trade on an exclusive sales basis in the territory covered. For further details, communicate with Box No. 309, care *Soap.*

Nickel Catalyst—We will purchase all kinds of nickel catalyst residue or other metallic residues and similar by-products. If you have any quantity of by-products which you are now throwing away, you might consult us, as they may be valuable to you. Address Box No. 316, care *Soap.*

SPECIALS

Liquidating Complete Soap Plant
CEDAR RAPIDS, IOWA

1—54" x 72", 5000 lb. vertical, jacketed Crutcher.
1—42" x 36", 1500 lb. vertical, jacketed Crutcher.
40—1200 lb. Soap Frames, 52" long x 13½" wide x 44" deep.
1—1200 lb. Cutting Table, hand operated.
1—Crosby Soap Press, foot operated.
1—3000 gallon Boiling Kettle with steam coil.
1—3" Rotary Soap Pump.
All equipment in excellent condition, only slightly used.

Specials at New York

1—Ferguson Packomatic Filling, Weighing and Carton Sealing Machine, adjustable.
2—Dopp jacketed Crutchers, 135, 150 gallons.
3—Proctor & Schwartz Soap Chip Dryers.
2—Blanchard Mills No. 14, No. 10-A.
2—5-roll Chilling Units.
1—1200 lb. steel frame Slabber, power driven.
4—600 and 1200 lb. Slabbers and Cutting Tables, hand operated.
1—Huber 6" Plodder.
1—5' x 7' Soap Chilling Roll.
1—18" six knife Soap Chipper.
1—Strong Scott Simplex No. 2 Soap Powder Grinder with 20 H. P. motor.
Miscellaneous Pumps, Grinders, Frames, etc.
"We buy and sell from single items to complete plants."

BRILL EQUIPMENT CORP.
"Formerly STEIN-BRILL CORP."

183 Varick Street
New York, N. Y.
Telephone:
WAlker 5-6892

907 Mart Building
St. Louis, Mo.
Telephone:
Chestnut 0325

Cable Address:
"Bristen"

T. G. COOPER & CO.
INC.
47 North Second Street
Philadelphia

•

Import and Spot Lots of

Cresylic Acid
Commercial Olive Oil
Olive Oil Foots
Palm Oil
Castor Oil
Rapeseed Oil
Japan Wax
Carnauba Wax
Carbonate of Potash
Bicarbonate of Potash
S. American Vegetable Oils and Oil-Bearing Nuts

Where to buy

RAW MATERIALS AND EQUIPMENT

for the Manufacture of Soaps and Sanitary Products

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index to Advertisements, on page 148, for page numbers, *"Say you saw it in SOAP."*

ALKALIES

John A. Chew, Inc.
Columbia Alkali Co.
T. G. Cooper & Co.
Dow Chemical Co.
Eastern Industries
Hooker Electrochemical Co.
Innis, Speiden & Co.
Niagara Alkali Co.
H. H. Rosenthal Co.
Solvay Sales Corp.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

AROMATIC CHEMICALS

American-British Chemical Supplies
Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
Dow Chemical Co.
P. R. Dreyer, Inc.
E. I. du Pont de Nemours & Co.
Felton Chemical Co.
Firmenich & Co.
Charles Fischbeck & Co.
Fritzsche Brothers, Inc.
General Drug Co.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Co.
Norda Essential Oil & Chemical Co.
Orbis Products Corp.
Schimmel & Co.
Solvay Sales Corp.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

BULK AND PRIVATE BRAND PRODUCTS

Antiseptol Co.
Baird & McGuire, Inc.
Buckingham Wax Corp.
Candy & Co.
Chemical Supply Co.
Clifton Chemical Co.
Davies-Young Soap Co.
Exterminating Materials Co.
Federal Varnish Co.
Fuld Bros.
Harley Soap Co.
Koppers Co.
Kranich Soap Co.
Philadelphia Quartz Co.
John Powell & Co.
Geo. A. Schmidt & Co.
Shawmut Specialty Co.
Solarine Co.
Sweeping Compound Mnfrs. of N. Y.
Uncle Sam Chemical Co.
T. F. Washburn Co.
White Tar Co.
Windsor Wax Co.

CHEMICALS

American-British Chemical Supplies
Carbide & Carbon Chemicals Corp.
John A. Chew, Inc.
Columbia Alkali Co.
T. G. Cooper & Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Eastern Industries
Hooker Electrochemical Co.
Industrial Chemical Sales Co.
Innis, Speiden & Co.
Mechling Bros. Chemical Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Philadelphia Quartz Co.
Rohm & Haas Co.
H. H. Rosenthal Co.
Solvay Sales Corp.
Standard Silicate Co.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

COAL TAR RAW MATERIALS

(Cresylic Acid, Tar Acid Oil, etc.)
American-British Chemical Supplies
Baird & McGuire, Inc.
Barrett Co.
T. G. Cooper & Co.
Innis, Speiden & Co.
Koppers Co.
Monsanto Chemical Co.
Reilly Tar & Chemical Co.
White Tar Co.

COLORS

Fezandie & Sperrle
Pylam Products Co.

CONTAINERS and CLOSURES

American Can Co. (Tin Cans, Steel Pails)
Anchor Cap & Closure Corp. (Closures & Bottles)
Capstan Glass Co. (Bottles)
Continental Can Co. (Tin Cans)
National Can Co. (Cans)
Salem Glass Works (Bottles)
Wilson & Bennett Mfg. Co. (Steel Pails and Drums)

DEODORIZING BLOCK HOLDERS

Clifton Chemical Co.
Fuld Bros.

ESSENTIAL OILS

Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
P. R. Dreyer Inc.
Felton Chemical Co.
Firmenich & Co.
Charles Fischbeck & Co.
Fritzsche Brothers, Inc.
Leghorn Trading Co.
Magnus, Mabee & Reynard, Inc.
Norda Essential Oil & Chemical Co.
Orbis Products Corp.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

(*Continued on page* 146)

PROFESSIONAL DIRECTORY

PEASE LABORATORIES, Inc.

Chemists, Bacteriologists, Sanitarians

39 West 38th Street
New York

Food, Drug and Cosmetic Problems—Compliance with Official Requirements—Meeting New and Anticipated Competitions with Improved and New Products

H. A. SEIL, Ph.D E. B. PUTT, Ph.C., B.Sc.

SEIL, PUTT & RUSBY, INC.

Analytical and Consulting Chemists

Specialists in the Analysis of Pyrethrum Flowers, Derris Root, Barbasco, or Cube Root—Their Concentrates and Finished Preparations

ESSENTIAL OILS SOAP

16 East 34th Street, New York, N. Y.

STILLWELL AND GLADDING, Inc.

Analytical and Consulting Chemists

Members Association of
Consulting Chemists and Chemical Engineers

130 Cedar Street New York City

APPLIED RESEARCH LABORATORIES, Inc.

DAYTON, N. J.

Bacteriology, Pathology, Physiology

Vitamin and Drug Bioassays
Germicidal and Sterility Tests
Toxicity and Other Animal Studies
Peet-Grady Insecticide Tests

KILLING
strength of Insecticides
by PEET GRADY METHOD
(Official I. & D. code method) and
PYRETHRINS in PYRETHRUM FLOWERS
(by Gnadinger's Method)
We raised and killed more than 1 million flies in the last 2 years
ILLINOIS CHEMICAL LABORATORIES, INC.
5235 WEST 65th STREET CHICAGO, ILL.

SOAPS — DETERGENTS

Analyses Development
Consultation Formulas

HochstadterLaboratories
INCORPORATED
254 West 31st St. New York City

Entomological Testing Laboratories, Inc.

We offer you a medium for purchasing insecticides on an intelligent basis.

Entomological testing by the Peet-Grady method, and chemical examination of insecticides are available.

114 E. 32nd St. New York, N. Y.

FOSTER D. SNELL, INC.

Chemists—Engineers

Every form of Chemical Service

305 WASHINGTON STREET BROOKLYN, N. Y.
215 N. Calvert Street, Baltimore, Md.

Patents—Trade Marks

Before disclosing your inventions to anyone send for blank form "Evidence of Conception" and instructions "How to Establish Your Rights."

All cases submitted given personal attention by members of the firm. Information and booklet free.

Lancaster, Allwine & Rommel
PATENT LAW OFFICES
Suite 402, Bowen Building Washington, D. C.

Refer To Your

SOAP BLUE BOOK

for F.D.A. Method for Testing of Disinfectants and Antiseptics.

Official N.A.I.D.M. Method for Testing and Grading of Insecticides.

MACNAIR-DORLAND CO.

Publishers

254 W. 31st Street New York, N. Y.

Skinner & Sherman, Inc.

246 Stuart Street, Boston, Mass.

Bacteriologists and Chemists

Disinfectants tested for germicidal value or phenol co efficient by any of the recognized methods.

Research—Analyses—Tests

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Eastern Industries
Hooker Electrochemical Co.
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Geo. A. Schmidt & Co.
Shawmut Specialty Co.
Solarine Co.
Sweeping Compound Mnfrs. of N. Y.
Uncle Sam Chemical Co.
T. F. Washburn Co.
White Tar Co.
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Columbia Alkali Co.
T. G. Cooper & Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
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Industrial Chemical Sales Co.
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Philadelphia Quartz Co.
Rohm & Haas Co.
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National Can Co. (Cans)
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Anthony J. Fries (Soap Dies)
Houchin Machinery Co. (Soap Machinery)
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International Nickel Co. (Monel Metal)
R. A. Jones & Co. (Automatic Soap Presses and Cartoning Machinery)
Koppers Company (Coal Tar Plants, Power Plants, Valves, Castings, Pipe, Tanks)
Package Machinery Co. (Packaging)
Proctor & Schwartz (Dryers)
C. G. Sargent's Sons Corp. (Dryers)
Stokes & Smith Co. (Packing Machinery)
Viking Pump Co. (Pumps)

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Consolidated Products Co.
Newman Tallow & Soap Machinery Co.
Stein Equipment Corp.

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T. G. Cooper & Co. (Waxes)
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Exterminating Materials Co. (Exterminators' Supplies)
Hercules Powder Co. (Pine Oil and Rosin)
Industrial Chemical Sales Co. (Decol. carbon, Chalk)
Innis, Speiden & Co. (Fumigants and Waxes)
Koppers Company (Coal, Coke, Roofing Materials)
N. I. Malmstrom & Co. (Lanolin)
Pylam Products Co. (Lathering Agent)
Rohm & Haas Co. (Synthetic Insecticide Concentrates)
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Victoria Paper Mills Co. (Paper Accessories)

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Niagara Alkali Co.
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Solvay Sales Corp.
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Felton Chemical Corp.
Firmenich & Co.
Charles Fischbeck & Co.
Fritzsche Brothers, Inc.
General Drug Co.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Norda Essential Oil & Chemical Co.
Orbis Products Corp.
Schimmel & Co.
Ungerer & Co.
Van Ameringen-Haebler. Inc.

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O'Connor & Kremp
Pennsylvania Refining Co.
S. Schwabacher & Co.
Sherwood Petroleum Co.
L. Sonneborn Sons.

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S. B. Penick & Co.
R. J. Prentiss & Co.
McCormick & Co.
McLaughlin, Gormley, King Co.
John Powell & Co.
H. H. Rosenthal Co.
Sherwood Petroleum Co.

SOAP DISPENSERS

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Clifton Chemical Co.
Fuld Bros.

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Mechling Bros. Chemical Co.
Philadelphia Quartz Co.
Standard Silicate Co.

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Dobbins Mfg. Co.
Fumeral Co.
Hudson Mfg. Co.
Lowell Manufacturing Co.
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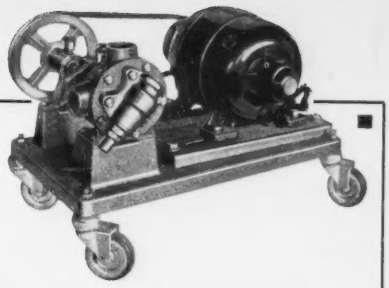

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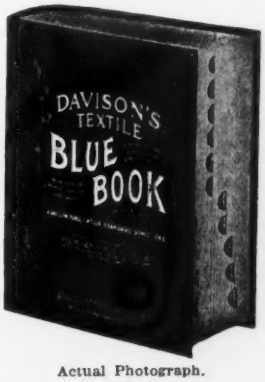

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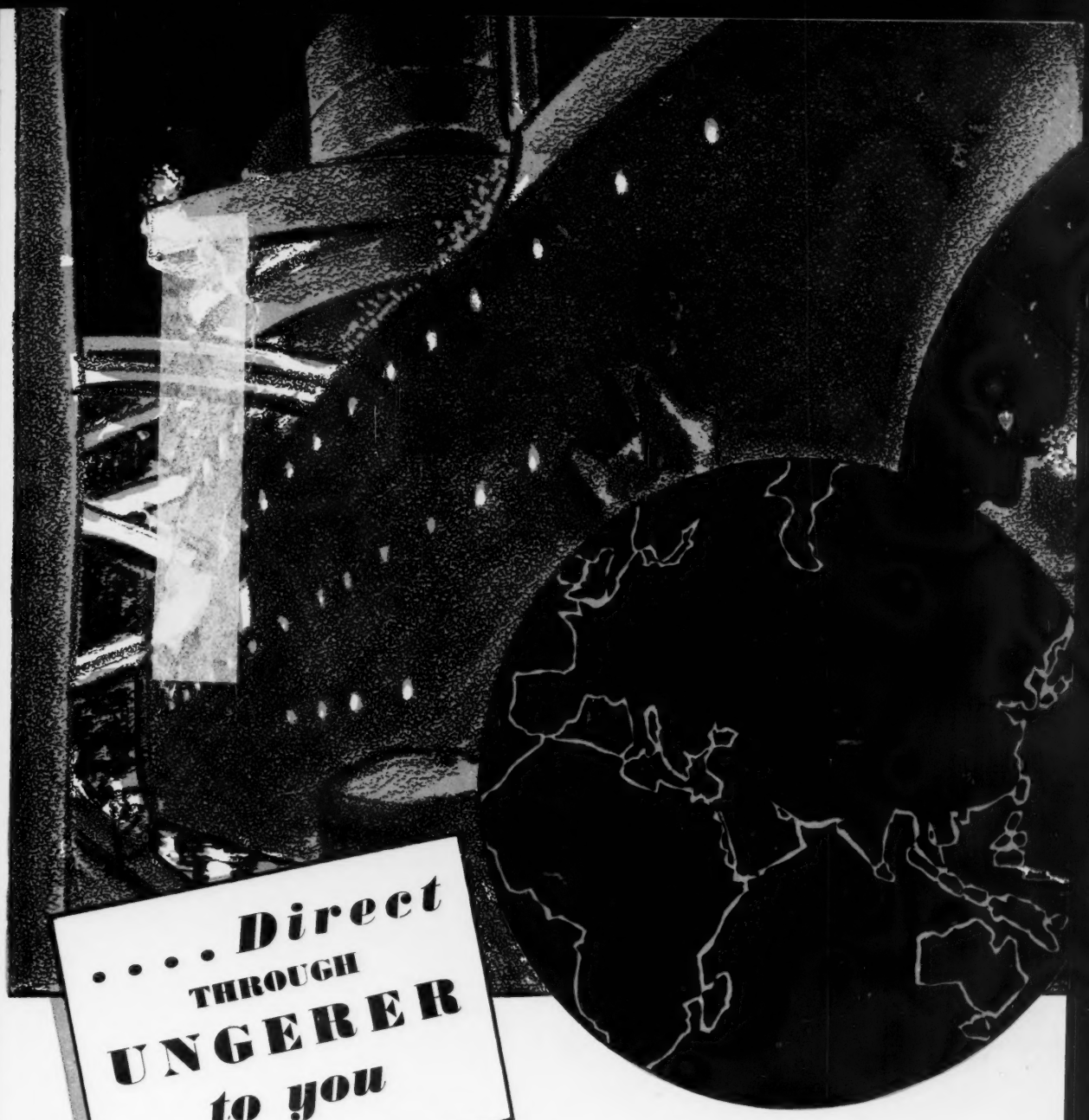

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